

### **INITIAL STATEMENT OF REASONS**

California Code of Regulations, Title 8, Chapter 4, Subchapter 4,  
Articles 2 and 8, Appendix B - Plates B-14 and B-15, and  
Appendix C - Plates C-26-a and C-27, **Construction Safety Orders, Explosives;**  
Subchapter 7, Group 18, Articles 113-123,  
**General Industry Safety Orders, Explosives and Pyrotechnics;**  
Subchapter 17, Articles 1 and 50-55, Appendices A and B,  
**Mine Safety Orders, Explosives;** and  
Subchapter 20, Articles 2 and 20-24, **Tunnel Safety Orders, Explosives.**

### **EXPLOSIVES**

### **SUMMARY**

Pursuant to the amended Administrative Procedure Act (Stats.1979, c. 567), the Occupational Safety and Health Standards Board (Board) reviewed Group 18, Explosives and Pyrotechnics, of the General Industry Safety Orders to ensure these regulations met the standards for necessity, authority, clarity, consistency, reference and nonduplication as defined by the California Administrative Code, Title 1, Chapter 1, Office of Administrative Law (OAL). The Statement of Review Completion (SORC) was submitted to OAL on May 22, 1986.

An ad hoc advisory committee was convened to assist in the development of remedial rulemaking. The committee provided assistance in determining which regulations needed revision, repeal or where new regulations were needed to reflect the advances in explosive materials technology and practices. Also, it was recommended that an effort be made to consolidate all Title 8 explosive regulations, those contained in the Construction, Mine, and Tunnel Safety Orders, into one convenient location, preferably, the General Industry Safety Orders. However, prior to completion of the rulemaking action, Governor George Deukmejian defunded the Cal/OSHA program with respect to the private sector. This resulted in cessation of all rulemaking action on the explosives and

Initial Statement of Reasons  
Explosives Reorganization

pyrotechnics rulemaking package and other pending actions that affected the private sector.

In November 1988, Proposition 97 was passed, which reinstated the Cal/OSHA program for the private sector. With this action, the Standards Board's staff reconvened the ad hoc advisory committee with the intent of initiating rulemaking action for explosives and pyrotechnics. Included in the advisory committee discussion was OSHSB Petition File No. 236, submitted by BROCO, Inc. The Petitioner requested the Board to promulgate regulations relating to the use of explosive materials for avalanche control blasting, and modifications to address concerns expressed by Federal OSHA regarding being at least as effective as (ALAEA) the federal counterpart regulations. However, after the advisory committee, there was no further action taken in updating or revising the explosive regulations.

During the 18 months that California did not have a safety and health program for the private sector, Federal OSHA promulgated over 20 new regulations affecting the private sector. As the result of this federal rulemaking action, the Board determined that the explosive rulemaking project would be put on hold until all the backlog of federal actions had been acted on.

In an effort to complete the explosive rulemaking and in response to correspondence from Federal OSHA regarding concerns of California's regulations being at least as effective as the federal counterparts, a plan was developed in which a series of rulemaking actions would be undertaken. The first two of these rulemaking projects were initiated during 1995. One rulemaking project involved extensive revisions to the Construction Safety Orders. The second rulemaking project addressed the General Industry Safety Orders and Petition File No. 236 regarding avalanche blasting and an exemption for Department of Defense (DOD) contractors. Those rulemakings were completed, heard, and approved by the Office of Administrative Law during 1996 and 1997, respectively. This proposed rulemaking will address the remaining concerns and recommendations made by the advisory committees.

### **SPECIFIC PURPOSE OF PROPOSED ACTION**

The specific purpose of this proposed action is to update the explosive regulations to reflect modern technologies, practices, usage and other related functions of the explosives and pyrotechnic industries, and to consolidate all the explosive regulations into one location in the General Industry Safety Orders. This rulemaking will complete a project initially begun during the AB 1111 regulation review to comply with the legislative mandate requiring that all administrative regulations were to be reviewed. AB 1111 amended the Administrative Procedure Act to require State agencies that adopted administrative regulations to review all their regulations for authority, reference, necessity, clarity, consistency, and non-duplication.

**FACTUAL BASIS OF PROPOSED ACTION**

This proposed rulemaking action contains numerous non-substantive editorial, grammatical, spelling, and gender revisions. In addition, as the result of the addition or repeal of outdated or redundant regulations, sections/subsections have been renumbered. Also, the term "explosive materials" has been substituted wherever the word "explosives" or "blasting agent" appears to reflect the current industry language. The addition of proper authority and reference citations that currently do not exist have also been inserted. These proposed non-substantive revisions are not all discussed in the Initial Statement of Reasons. However, these proposed revisions are clearly indicated on the regulatory text in underline and strikeout format. In addition to these non-substantive revisions, the following specific revisions are proposed:

## **Subchapter 4. Construction Safety Orders.**

It is proposed to either repeal or transfer the explosive regulations from the Construction Safety Orders (CSO) to Group 18 of the General Industry Safety Orders (GISO). The proposed actions to repeal sections are either obsolete requirements or sections that already exist within the GISO. The proposal to eliminate obsolete requirements is necessary to remove regulations that are no longer applicable. The proposal to eliminate duplicative regulations is necessary to remove duplication of requirements. Because the requirements already exist in the GISO, the regulations necessary to maintain a safe and healthful work site will still be in effect.

The regulations proposed for transfer into the GISO are those that presently do not exist in the GISO. These regulations are unique to the CSO and must be transferred to retain their provisions in the GISO and/or to clarify the existing GISO requirements. Also, included in these regulations proposed for transfer will be those that were recently adopted into the CSO to be at least as effective as (ALAEA) the federal counterpart explosive regulations, and those that will clarify existing GISO requirements. This proposal is necessary to consolidate the explosive regulations into one location in the GISO, making it more convenient for the user.

### **Article 2. Definitions.**

#### **Section 1504. Definitions.**

Existing Section 1504 contains definitions of terms used within the CSO regulations to ensure the devices and/or processes addressed within the regulations are clearly defined and understood.

#### **Subsection (a).**

Existing subsection (a) states that the following definitions shall apply in the application of these Orders. It also states that the singular number includes the plural, and the plural includes the singular.

It is proposed to delete the latter part of subsection (a) that states the singular number includes the plural, and the plural includes the singular. This proposal is necessary to delete obsolete language that is no longer applicable and therefore, unnecessary.

It is proposed to repeal, transfer, and transfer and editorially revise some of the definitions of Section 1504 to Section 5237 of the GISO, the definition section. The definitions that are proposed for repeal either already exist in the GISO and therefore, eliminate duplicative definitions or reflect obsolete industry practices, technology, terminology, or classification of materials and therefore, are no longer necessary. The definitions that are proposed for transfer to the GISO are either transferred verbatim or

## Initial Statement of Reasons Explosives Reorganization

transferred and editorially revised for clarity to reflect changing industry practices, technology, terminology, or classification of materials.

The following definitions are proposed for **repeal**: Blasting Agent; Detonating Cord; Blasting Cap (the term “Blasting Cap” already exists in the GISO; however, the definition is proposed for transfer under the term “Detonator”); Electric Blasting Cap (the term “Electric Blasting Cap” already exists in the GISO; however, the definition is proposed for transfer under the term “Detonator”); Electric Delay Blasting Caps (the term “Electric Delay Blasting Caps” already exists in the GISO; however, the definition is proposed for transfer under the term “Detonator”); Nonelectric Delay Blasting Cap (the term “Nonelectric Delay Blasting Cap” already exists in the GISO; however, the definition is proposed for transfer with editorial revisions under the term “Detonator” as “Shock Tube, Gas Initiation, or Miniaturized Detonating Cord Blasting Caps”); Explosive Materials; Misfire; Powder (obsolete terminology); Primary Blasting; Primer; Safety Fuse (the term “Safety Fuse” already exists in the GISO as “Fuse, Safety”); Secondary Blasting; Springing; Stemming (the term “Stemming” already exists in the GISO as “Stemming Material”); Water Gels, Slurry Explosives; Two Broad Classes of Water Gels (obsolete classifications); Wires, Connecting (the term “Wires, Connecting” already exists in the GISO as “Connecting Wires”); and, Wires, Leading (the term “Wire, Leading” already exists in the GISO as “Leading Wires”).

The following definitions are proposed for **transfer** to Section 5237 of the GISO: Air Loader (editorially revised for clarity); Blasting Operations (the term “Blasting Operation” already exists in the GISO; however, the definition is revised to include the CSO definition); Detonator (the term “Detonator” already exists in the GISO; however, the definition is revised to include the CSO definition with editorial revisions); Fuse Cap (transferred to the GISO under “Detonator” with editorial revisions); Emulsion (editorially revised for clarity); Explosives (the term “Explosives” already exists in the GISO; however, the definition is revised to include the CSO definition); Division 1.1 (editorially revised for clarity); Division 1.2 (editorially revised for clarity); Division 1.3 (editorially revised for clarity); Division 1.4 (editorially revised for clarity); Division 1.5; Division 1.6 (editorially revised for clarity); Licensed Blaster (transferred to the GISO under the new term “Blaster, Licensed”); Magazine, Type 1 (editorially revised for clarity); Magazine, Type 2 (editorially revised for clarity); Magazine, Type 3 (editorially revised for clarity); Magazine, Type 4 (editorially revised for clarity); Magazine, Type 5 (editorially revised for clarity); Wires, Bus (transferred to the GISO under the term “Bus Wires”); and, Wires, Permanent Blasting [transferred to the GISO and editorially revised under the term “Permanent Blasting (Leading) Wires”].

### **Article 8. Explosives.**

#### **Section 1550. Competency and Qualifications of Blasters.**

##### **Subsection (a).**

Initial Statement of Reasons  
Explosives Reorganization

A portion of existing subsection (a) requires that all blasting operations be accomplished under the supervision of a licensed blaster.

The provisions of this portion of subsection (a) are proposed for transfer to the GISO, Section 5238 as revised subsection (a). The proposed transfer of the regulation is necessary because the GISO does not have regulations requiring that blasting operations be performed only under the supervision of a licensed blaster.

The latter portion of existing subsection (a) requires that blasting operations shall include on site transportation, and storage of commercial explosives, blasting agents, and other materials used in blasting.

This portion of subsection (a) is proposed for repeal because these provisions are already addressed in Section 5236(a) of the GISO and therefore, is unnecessary.

Subsections (b) and (c).

Existing subsection (b) requires the licensed blaster to be in good physical condition to be able to safely conduct blasting operations. Existing subsection (c) requires the licensed blaster is to be able to understand and give written and oral orders. Also, a “NOTE” is included to permit persons to work under the supervision of the licensed blaster for the purpose of qualifying for a California Blaster’s License.

The provisions contained in subsections (b) and (c) and the accompanying “NOTE” following subsection (c) are proposed for transfer to Section 5238(b) and (c), respectively, of the GISO. These proposed transfers are necessary because the GISO does not have regulations for the competency and qualifications of blasters.

Subsection (d)

Existing subsection (d) prohibits the handling and use of explosive materials while under the influence of intoxicating liquors, narcotics, or other dangerous drugs.

Subsection (d) is proposed for repeal because the provisions of this subsection will be addressed by the proposed revisions to Section 5247(b) of the GISO.

Subsections (e) and (f).

Existing subsection (e) requires the licensed blaster to furnish satisfactory evidence of competency and have the qualifications to perform the type of blasting operations for the specific work site. Existing subsection (f) requires the licensed blaster to show proof when requested by the Division or other authority having jurisdiction that the license is valid.

The provisions of subsections (e) and (f) are proposed for transfer to proposed Section 5238(d) and (e), respectively, of the GISO. These proposed transfers are necessary

Initial Statement of Reasons  
Explosives Reorganization

because the GISO do not have regulations for the competency and qualifications of blasters to perform specific types of blasting operations and a requirement to provide proof of being licensed.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1550.)**

Section 1552. Blaster's License.

Existing Section 1552 consists of an informational "NOTE" regarding the blaster's license qualifications that references the public back to Sections 344.20 and 344.21.

This reference is proposed for repeal. The regulated public has been notified of this transfer since 1977 and therefore, this reference is unnecessary.

Section 1555. Blasting Accident Reports and Procedures.

Existing Section 1555 requires that the Division be notified in the event of a blasting accident or unusual occurrence (lightning strike, vandalism, etc.) affecting the safety of workers in which explosive materials are involved. Personal injury does not have to occur. The report is to contain the name and license number of the blaster(s) involved; names and occupations of persons injured if any; type of explosive materials being used; method(s) of detonation; and an account of the incident. If injury did occur, the blasting operation is to be terminated until the Division has completed its investigation or authorized resumption of work.

Section 1555 is proposed to be transferred verbatim to the GISO as new Section 5248. This proposed transfer is necessary because the GISO do not have regulations addressing blasting accident report and procedure requirements.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1555.)**

Section 1556. Suspension-Blaster's License.

Existing Section 1556 regarding the suspension of blaster's license provision consists of an informational "CROSS-REFERENCE" that references the public back to Section 344.22.

This reference is proposed for repeal. The regulated public has been notified of this transfer since 1986 and therefore, this reference is unnecessary.

Section 1561. Storage of Explosives.

Existing Section 1561 contains requirements and restrictions regarding the quantity and storage of explosive materials. The regulation includes the types of storage facilities specific explosive materials are to be placed and stored in; the maximum quantity of

## Initial Statement of Reasons Explosives Reorganization

explosive materials that can be stored in specific magazine types; protecting magazines from accidental impact; magazine locking and entry requirements and restrictions; explosive materials inventory control; steps to be taken when using wheeled vehicles to store explosive materials; and fire prevention procedures.

### Subsection (a).

Existing subsection (a) is proposed for repeal to eliminate duplication of requirements as its provisions are already contained in Section 5251(a) of the GISO and therefore, is unnecessary.

### Subsections (b). Quantity and Storage Restrictions, and Subsections (c), (e), and (f).

The provisions of existing subsections (b), excluding the “NOTE”; (c); (e); and (f) are proposed for transfer to the GISO as proposed Section 5251(h) through (k), respectively. The “NOTE” following subsection (b) is proposed for repeal as unnecessary as proposed Section 5262(c) is proposed to incorporate by reference the Institute of Makers of Explosives, Safety Library Publication No. 22, dated May 1993, that prescribes the minimum construction criteria for container and compartment magazines on vehicles and wheeled trailers. The provisions of subsection (e) are also currently contained in existing Section 5251(g) and (h) of the GISO that is proposed for transfer to proposed Section 5251(j). These proposed transfers are necessary because the construction, quantity, and storage requirements are virtually identical to the Bureau of Alcohol, Tobacco, and Firearms and Federal OSHA regulations, thus providing the regulated public consistent regulations. These specific regulations were submitted to Federal OSHA as the result of revisions to California’s Construction Safety Orders that were approved by the Office of Administrative Law on June 6, 1997.

### Subsection (d).

Existing subsection (d) is proposed for repeal to eliminate duplication of requirements as its provisions are already contained in proposed Section 5251(d) of the GISO and therefore, is unnecessary.

### Subsections (g) through (j).

Existing subsections (g) through (j) are proposed for repeal to eliminate duplication of requirements as their provisions are contained in proposed Sections 5256(b) and (d); 5256(f) and 5278(q); 5256(a); and 5252(a), respectively, and therefore, are unnecessary.

### Subsection (k)

A portion of existing subsection (k) is proposed for transfer to Section 5251(g) of the GISO. This proposed transfer to prohibit explosives storage magazines to be located within specified distances of low and high voltage electrical lines is necessary as it is industry practice to maintain the 25 foot distance from low-voltage electrical lines and



Initial Statement of Reasons  
Explosives Reorganization

the 100 foot distance from overhead high-voltage electrical lines. Also, this regulation does not presently exist in the GISO.

The other portion of existing subsection (k) regarding the proper placement of magazines should an electrical line break is proposed for repeal as this regulation is already contained in Section 5251(g) of the GISO and therefore, is unnecessary.

Subsections (ℓ) and (m).

Existing subsections (ℓ) and (m) are proposed for transfer to Section 5251(l) and (m) of the GISO, respectively. These proposed transfers are necessary because there are no counterpart regulations in the GISO.

Subsection (n).

Existing subsection (n) is proposed for repeal to eliminate duplication of requirements as its provisions are already contained in proposed Section 5251(e) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1561.)**

Section 1562. Construction and Use of Magazines.

Existing Section 1562 contains the requirements for the types of structures or conveyances, materials they are to be constructed of, types of locks and hasps to be used on the doors/entries, and other information pertaining to the physical structure of Type 1 through Type 5 explosive material storage magazines. Also, this section contains requirements for signage, bullet resistance, fire and theft resistance, and drainage considerations.

Except for subsection (a)(2) that requires the ground around Type 1 magazines to be sloped away for drainage or that other adequate drainage be provided, the remaining provisions of this section are proposed for transfer to new Section 5253.1 of the GISO. Existing subsection (a)(2) is proposed for transfer to Section 5251(e)(1) of the GISO. This proposed transfer is necessary because the GISO does not have regulations for the construction and use of magazines and these regulations mirror the Bureau of Alcohol, Tobacco, and Firearms and Federal OSHA regulations, providing the regulated public with consistent regulations.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1562.)**

Section 1563. Construction and Use of Second-Class Magazines.

Existing Section 1563 consists of an informational “NOTE” regarding the storage of

Initial Statement of Reasons  
Explosives Reorganization

primers and detonators in second-class magazines and where the magazines should be located with respect to other second-class magazines.

This section is proposed for repeal as it is informational and has no regulatory effect and therefore, is unnecessary.

Section 1564. Transportation of Explosive Materials.

Existing Section 1564 contains the requirements for the vehicles, vehicle construction, driver, types of magazines, fire extinguisher capacities, delivery considerations, prohibitions regarding transportation of mixed cargoes, and fire prevention and repair considerations to be adhered to when transporting explosive materials.

Section 1564(a), (c), (d), (f) through (j), and (ℓ) are proposed for repeal as the requirements of these subsections duplicate those requirements already located in proposed Section 5262(d), Section 5266(d), and Section 5267(c); Section 5262(f); Section 5262(i); Section 5262(g); Section 5262(m); Section 5262(i); Section 5262(p); Section 5262(o); and Section 5262(j)(1) and Section 5236(b)(2) of the GISO, respectively, and therefore, are unnecessary.

Section 1564(b), (e), and (k) that address the transportation of detonators and primers in Type 2 or Type 3 magazines, the speed of explosive materials transfer at the job-site, and the taking of a vehicle carrying explosive materials to a garage for repairs or servicing are proposed for transfer to Section 5262(c), (r), and (k) of the GISO, respectively. This proposed action is necessary to ensure retention of these regulations in the GISO from the CSO.

The “NOTE” to Section 1564 is informational and directs the reader to the California Vehicle Code, Division 14, for additional requirements for explosive transportation requirements on public roads and highways. The “NOTE” is proposed for repeal as transporters of explosives on public highways and roads already have to be permitted by various agencies and are, or should be, knowledgeable of the California Vehicle Code requirements. In addition, the intent of the “NOTE” is stated in Section 5236 as proposed subsection (b)(2). Therefore, to eliminate duplication of information and since the “NOTE” is informational only, this “NOTE” is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1564.)**

Section 1565. Handling and Use of Explosive Materials.

Existing Section 1565 contains the requirements for the handling and use of explosive materials for blasting operations. These requirements include fire prevention; tools for opening powder containers; paper carton, rubbish and sawdust disposal; power and lighting circuit location; primer house location; loading and blasting sequence; restrictions on vehicular traffic; attendance at loaded holes; ensuring explosive materials

## Initial Statement of Reasons Explosives Reorganization

are not abandoned or left unattended at the blast site; fire fighting restrictions; and prohibiting employees from carrying detonators or primers on their person.

### Subsections (a) through (e).

Existing subsections (a) through (e) prohibit any source of ignition within 50 feet of where explosives are to be handled, except those sources necessary to light fuse or fire electric detonators in the area where the loaded holes are located; require that specific type tools be used to open certain types of powder containers; require paper cartons, sawdust, and other rubbish from explosive containers to be removed to a safe place and destroyed; prohibit the storage of explosive materials within 25 feet of an electric light or power circuit; and require all left over detonators, fuses, primers and other explosive materials to be promptly returned to the proper magazine(s).

These subsections are proposed for repeal as their provisions are already contained in proposed Section 5276(a) through (e), respectively, of the GISO and therefore, are unnecessary.

### Subsection (f).

Existing subsection (f) requires that a positive method be provided to maintain a continuous record of the amount of explosive materials placed or removed (transferred) from each storage magazine. The date and signature of the person making the transfer is required.

The provisions of subsection (f) are proposed for transfer to proposed Section 5251(n) of the GISO. This proposal is necessary to ensure retention of this regulation in the GISO from the CSO.

### Subsections (g) through (i) and (k).

Existing subsections (g) through (i) and (k) require that primers not made up in a primer house are to be made up at a location at least 100 feet from any storage magazine and at a safe distance from other employees not involved in the blasting operations and also, the makeup or primer house shall comply with the design requirements of Section 5257 of the GISO; the loading of holes is not to start until all drilling is complete, drill holes are cleaned or blown out except when impractical; when loading and drilling operations are taking place simultaneously, at least 50 feet of separation is maintained between the operations; no vehicle traffic is permitted over loaded holes; and no explosive materials are to be abandoned.

These subsections are proposed for repeal as their provisions or intent are contained in proposed Sections 5257(c); 5278(a); 5278(c); and 5240(a), 5251(a), and 5278(s); respectively, of the GISO, and therefore, are unnecessary.

### Subsection (j).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (j) requires that loaded holes shall not be left unattended.

It is proposed to transfer the requirement of subsection (j) to Section 5278 as new subsection (o)(2). This proposal is necessary to ensure retention of this regulation into the GISO from the CSO.

Subsection (ℓ).

Existing subsection (ℓ) prohibits fighting fires when the explosive materials are in imminent danger of contact with the fire. The regulation also requires that the employees be removed to a safe area and the fire area guarded against intruders.

It is proposed to transfer subsection (ℓ) to Section 5276 as new subsection (ℓ) of the GISO. This proposal is necessary to ensure retention of the existing CSO regulation within the GISO.

Subsection (m).

Existing subsection (m) requires that insofar as possible, blasting operations above ground are to be conducted between sunrise and sunset.

This requirement is proposed for repeal as it is vague and ambiguous and therefore, is unnecessary. In addition, this provision is also contained in Section 5291(a)(NOTE) of the GISO and is also proposed for repeal as it is unnecessary.

Subsection (n).

Existing subsection (n) prohibits the use of black powder for construction blasting.

This subsection is proposed for transfer to proposed Section 5243(a)(8) of the GISO as the proposed action ensures retention of a regulation that does not exist in the GISO.

Subsection (o).

Existing subsection (o) prohibits leaving explosive materials unattended at the blast site.

It is proposed to transfer the requirement of subsection (o) to Section 5278 as new subsection (o)(1) as the proposed action ensures retention of a regulation that does not exist in the GISO.

Subsection (p).

Existing subsection (p) prohibits employees from carrying detonators or primers on their person.

Initial Statement of Reasons  
Explosives Reorganization

This subsection is proposed for repeal as its provisions are contained in Section 5268(a) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1565.)**

Section 1566. Blasting Signals.

Existing Section 1566 delineates requirements for blasting signals to alert employees/individuals of an impending blast.

Subsections (a) through (c).

Existing subsections (a) through (c) require that the employer or licensed blaster fix the time of blasting; all persons in the danger area shall be warned and be ordered to a safe distance from the danger area and a competent flagger will be posted at all access point to the danger area; and the blast will not be fired until all surplus explosive materials are in a safe place and all persons and vehicles are not in danger.

These subsections are proposed for repeal as these provisions are already contained in Section 5291(a); Section 5291(b) and (c); and Section 5291(b), respectively, of the GISO and therefore, are unnecessary.

Subsections (d) through (f).

Existing subsections (d) through (f) require that a clearly audible warning signal has been sounded using a listed set of signals; that the employees be made familiar and instructed with regard to the signals; and that the “ALL CLEAR” signal not be sounded until the licensed blaster has made a visual inspection of the blast area for misfires. Where misfires are found, other requirements referenced in Section 1568 are to be complied with before the signal can be sounded.

The provisions of these subsections are proposed for transfer to Section 5291(d), (e) and (f), respectively, of the GISO as a result of the proposed reorganization of the explosive safety orders. The “NOTE” to Section 1566(e) to direct the reader to other sections for return to site requirements is proposed for repeal as this “NOTE” is unenforceable and adds no meaning to the regulation.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1566.)**

Section 1567. Explosive Materials, Loading Machines, and Methods.

Subsections (a) through (c).

Existing subsections (a) through (c) require that air loaders are not to be used to load

## Initial Statement of Reasons Explosives Reorganization

dynamite and shall comply with Section 5280 of the GISO; only machines and tools used for loading explosive materials into bore holes are on site prior to beginning the loading operation; and only persons necessary for the loading operation will be permitted at or within 50 feet of the loading site during loading operations.

Existing subsection (a) is proposed for repeal as the requirements of Section 5280(e)(2) already require provisions that make air loading of dynamite infeasible or impossible. It is not feasible because dynamite has high detonation sensitivity and not suitable to be loaded by air loaders. In addition, it is not industry practice to air load dynamite. Therefore, subsection (a) is unnecessary.

Existing subsections (b) and (c) are proposed for repeal as their provisions duplicate the provisions of proposed Section 5278(a) and (d), respectively, of the GISO and therefore, are unnecessary.

### Subsections (c)(1) and (c)(2).

Existing subsection (c)(1) contains requirements for an alternative blasting plan when the operator/licensed blaster cannot maintain the minimum 50 foot distance from personnel or equipment not directly related to the blasting operation. Existing subsection (c)(2) requires that the Division approve the alternative plan if specified requirements are met.

These subsections are proposed to be transferred verbatim to the GISO as proposed Section 5278(d)(1) and (d)(2) to retain the continuity of the existing CSO regulations.

### Subsections (d) through (l).

Existing subsections (d) through (l) prohibit the following: springing holes within 100 feet of any hole containing explosive materials for primary blasting; loading a sprung hole before it has had sufficient time to cool; using drop fuses or any other method which requires the ignition of the fuse prior to placement of the charge in its final position; loading boreholes before they are blown or washed; using less than a No. 6 strength detonator; using detonators that are not encased in explosives when inserted into the borehole unless a safety primer or other acceptable method is used; tamping using heavy strokes; tamping of primers; confining explosive materials when stemming with combustible materials; using wooden tamping poles with metal parts, except those with nonferrous ferrules for extending the length of the pole; using tamping poles that do not have a "square" tamping end and are of such size that the pole could bypass the cartridge in the hole; and the use of tamping poles that are not approved. There is also a "NOTE" to subsection (l) that discusses the physical characteristics of plastics that are not suitable for use as tamping poles.

Subsections (d) through (l) are proposed for repeal as the provisions of these subsections duplicate those which are contained in Section 5278(k), (l), (a), (f), (g), (h), and (i) and Section 5277(c), (b), and (a), respectively, of the GISO and therefore, are unnecessary. The "NOTE" to subsection (l) is proposed for repeal as it is already addressed in existing Section 5277(d)Note that is proposed for transfer as a new "NOTE" to proposed Section

Initial Statement of Reasons  
Explosives Reorganization

5277(a). Therefore, this “NOTE” is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1567.)**

Section 1568. Misfires.

Existing Section 1568(a) through (e) require, respectively, the following: the shot area is to be examined after the shot; misfires or suspected misfires are to be reported to the person in charge or the licensed blaster; where possible, the number of charges set are to be counted and compared to the total number of explosions heard; a 60 minute wait for fuse blasting, or a 30 minute wait when using other types of detonating systems before entering the area where a misfire has occurred and performing one of two listed procedures to neutralize the misfire; that holes not be drilled if there is a danger of intersecting a charged hole; and that no work except that necessary to remove the hazard of the misfire shall be performed in the danger area. Also, there shall only be the licensed blaster and the necessary crew in the danger area during the removal of the misfire.

Section 1568(a), (c), (d), and (e) are proposed for repeal as these provisions are contained in Section 5293(a); (b), (b)(1) and (b)(2); and proposed Section 5293(d) and (e) of the GISO, respectively, and therefore, are unnecessary. Section 1568(b) is proposed for repeal as it is not possible to accurately count the number of explosions in a blast sequence and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1568.)**

Section 1569. Secondary Blasting.

Existing Section 1569 contains prohibitions of activity that would create a hazard when conducting secondary blasting operations. Also, it requires specific detonating devices when the shots could displace another shot.

This section is proposed for repeal as Section 5292 of the GISO contains verbatim requirements and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1569.)**

Section 1570. Ammonium Nitrate.

Existing Section 1570(a) and (b) address the storage of ammonium nitrate, requiring that it be stored as required by a reference table and detailing what is to be done with the bags after being emptied. A “NOTE” following subsection (b) explains the hazards of ammonium nitrate after it has been sensitized with carbonaceous material.

Initial Statement of Reasons  
Explosives Reorganization

Section 1570(a) and the informational “NOTE” to subsection (b) are proposed for repeal as their provisions are contained in Section 5253(a) and (d)(NOTE), respectively, and therefore, are unnecessary. Section 1570(b) is proposed to be transferred verbatim to proposed Section 5240 as new subsection (h) of the GISO. This proposed action is necessary to ensure continuity of the existing CSO regulation of which there is no counterpart GISO regulation.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1570.)**

Section 1571. Fuse Blasting.

Subsections (a) through (c).

Existing subsections (a) through (c), respectively, specify how the average burning rate for safety fuse will be determined; require some method to waterproof the fuse when doing wet work and prohibit oil or grease on the joints between the cap and fuse; and require cutting at least one inch of fuse from the end of each coil of fuse to ensure a damp fuse end is not inserted into the cap.

These subsections are proposed for repeal as their provisions are already contained in the GISO, proposed Section 5295(b), proposed Section 5297(e), and Section 5297(a), respectively.

Subsection (d).

Existing subsection (d) requires that the fuse end be squarely cut and gently seated without twisting, and prohibits the use of a half hitch to secure the capped fuse to the cartridge. A “NOTE” is included recommending that a string tie method be used to secure the fuse to the cartridge.

The portion of existing subsection (d) regarding the square cutting of the fuse end is proposed for transfer to the GISO in proposed Section 5297 as new subsection (d). This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO. In addition, that portion of existing subsection (d) regarding the securing with a half hitch is proposed for repeal as its provisions are contained in proposed Section 5297(f) of the GISO and therefore, is unnecessary. Further, the “NOTE” following subsection (d) is proposed for repeal as Section 5297 proposes to revise the diagram showing the recommended methods of attaching capped fuse to primer cartridge and therefore, is unnecessary.

Subsections (e) through (g).

Existing subsections (e) through (g), respectively, require that only cap crimpers designed to attach the blasting cap to the fuse be used; the fuses are to be sufficiently long to extend beyond the collar of the hole, but in no case be less than three feet in length; and



Initial Statement of Reasons  
Explosives Reorganization

that damaged fuse is not used.

These subsections are proposed for repeal as their provisions are contained in proposed Section 5297(c), proposed Section 5298(a)(4), and proposed Section 5295(d), respectively, and therefore, are unnecessary.

Subsection (h).

Existing subsection (h) requires that fuse be cut and capped in a location equipped and suited for such work. The intent of this subsection is not contained in the GISO, and therefore, is proposed for transfer to Section 5297 as new subsection (d) of the GISO to ensure continuity of enforcement of this regulation.

Subsections (i) through (k).

Existing subsections (i) through (k) require that caps are not to be removed from the original container except when they are to be capped and used; and when lighting fuses, the length and burning rate of the fuse is to be considered. Also, the length and condition of the route to the place of safety is a consideration. No more than 12 safety fuses may be ignited consecutively and at least a 2 minute delay in the blast after the last fuse in the blast area has been ignited is to be provided; and no person shall approach the area where the charge was placed if there is reason to believe there has been a misfire.

These subsections are proposed for repeal as their provisions are already contained in Section 5297(b); proposed Section 5298(a)(2), (a)(7), and (a)(6), respectively; and proposed Section 5293(b) and therefore, are unnecessary. The “NOTE” to subsection (k) refers to Section 1568. This “NOTE” is unnecessary as Section 1568 is proposed for repeal as its provisions are already contained in Section 5293.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1571.)**

Section 1571.1. Use of Detonating Cord.

Existing Section 1571.1 provides the requirements for the selection, handling, and use of detonating cord used in blasting operations, is proposed to be transferred verbatim into the GISO as new Section 5298.1, Use of Detonating Cord. This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1571.1.)**

Section 1571.2. Underwater Blasting.

Existing Section 1571.2 provides the safety requirements for loading tubes and casings, blasting caps, minimum distance from water craft during the blasting operation,

Initial Statement of Reasons  
Explosives Reorganization

proximity of and the conducting of diving operations, blasting flags, explosive materials storage, and when float devices are required during underwater blasting operations.

This section is proposed to be transferred verbatim into the GISO as new Section 5308, Underwater Blasting. This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1571.2.)**

Section 1571.3. Blasting in Excavation Work Under Compressed Air.

Existing Section 1571.3 prohibits the storage of explosive materials in caissons; prohibit employees, with the exception of the licensed blaster, lock tender and powder crew, from being in the air lock when explosive materials are present; specifies when detonators and explosives may be taken into pressure working chambers; specifies the responsibilities of the licensed blaster; specifies the type of explosive materials to be used; and requires bonding and grounding at or near the portal of all metal pipes, tracks, air locks and steel tunnel lining, with a maximum allowable distance between cross-bonding points.

This section is proposed to be transferred verbatim into the GISO as new Section 5307, Blasting in Excavation Work Under Compressed Air. This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1571.3.)**

Section 1572. Deteriorated or Damaged Explosives.

Subsections (a) through (c).

Existing subsections (a) through (c) prohibit the use of explosives that would freeze when exposed to any temperature that may be encountered at the blast site or have deteriorated, been damaged or frozen so they are unfit for use and are to be disposed of by a licensed blaster. Also, the regulation prohibits the burning of wood, paper or fiber packing materials used with explosive materials in a fireplace, stove, or other confined space nor can it be used again for any purpose.

These subsections are proposed for repeal as the provisions of these regulations are contained in Section 5276 as new subsection (j), proposed Section 5241(b), proposed Section 5240(a), and proposed Section 5276(c) of the GISO, respectively, and therefore, are unnecessary.

The “NOTE” to subsection (a) is included providing information that thawing explosives is hazardous and should be avoided and that firmness of explosives during cold weather does not necessarily indicate they are frozen. The “NOTE” to subsection (b) is included

Initial Statement of Reasons  
Explosives Reorganization

recommending the explosive manufacturer be contacted for the most current product information and recommended disposal information.

The “NOTES” to subsections (a) and (b) are unnecessary as these ‘NOTES’ are informational only and therefore, are proposed for repeal.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1572.)**

Section 1573. Electric Blasting.

Subsection (a).

Existing subsection (a) requires that the source of current for electric blasting be from one of three sources. In addition, this subsection states that when using light or power circuits, caps are to be connected in series, parallel, or a combination of the two. Also, caps to be fired using a blasting machine are to be connected in accord with the number and arrangement as designated by the machine manufacturer.

The portion of existing subsection (a) pertaining to the source of current is proposed for repeal as those provisions are contained in proposed Section 5299(b) and therefore, are unnecessary. The latter portion of these provisions is proposed for transfer to Section 5299 as new subsection (c) of the GISO. This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO.

Subsection (b).

Existing subsection (b) prohibits the use of safety fuse where it would be difficult for the worker to reach adequate shelter within the time allowed by a burning fuse.

This subsection is proposed for repeal as its provisions are contained in proposed Section 5298(a)(3) of the GISO and therefore, is unnecessary.

Subsection (c).

Existing subsection (c) requires that all blasting caps in a circuit be of the same manufacturer.

Subsection (c) is proposed for repeal as similar provisions are contained in existing Section 5278(u) that is proposed for transfer to proposed Section 5299(j) of the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsection (d).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (d) contains distance requirements for the blasting line and power and light lines. In addition, this subsection contains precautions, such as securing wire with mats to prevent lead wires from coming into contact with energized electrical lines and running the lead and blasting wires at 90 degree angles to the high voltage lines to reduce unexpected blasts from induced current.

This subsection is proposed for repeal as its provisions are contained in proposed Section 5276(d) and proposed Section 5279(a) and (b) of the GISO and therefore, is unnecessary.

Subsection (e).

Existing subsection (e) prohibits the use of ground or grounded wires to carry the blasting circuit current.

This subsection is proposed for repeal as its provisions are already contained in proposed Section 5299(f) of the GISO and therefore, is unnecessary.

Subsection (f).

Existing subsection (f) requires that permanent blasting lines, safety switches, and blasting switches be maintained in proper condition for service.

This subsection is proposed for repeal as its provisions are contained in proposed Sections 5300 through 5304 of the GISO and therefore, is unnecessary.

Subsection (g).

Existing subsection (g) requires that shot firing equipment be located where the operator is protected from the hazard of flying debris caused by the blast.

This subsection is proposed for repeal as its provisions are contained in proposed Section 5291(b) of the GISO and therefore, is unnecessary.

Subsection (h).

Existing subsection (h) requires the licensed blaster to conduct a survey for extraneous currents prior to loading the holes and eliminates any dangerous currents before loading operations are begun.

This subsection is proposed for transfer verbatim as proposed Section 5299(a) of the GISO. This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO.

Subsection (i).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (i) requires all connecting and leading wires to be insulated solid copper or aluminum wire in good condition with sufficient current carrying capacity.

This subsection is proposed for repeal as its requirements are already contained in Section 5302(a) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1573.)**

Section 1573.1. Blasting with Light or Power Circuit.

Subsection (a).

Existing subsection (a) requires that when a light or power source is used for firing shots, the electrical connections will be made in an approved weatherproof enclosure.

Section 1573.1(a) is proposed for transfer into the GISO in Section 5304 as new subsection (b). This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO.

Subsection (b).

Existing subsection (b) contains specific requirements and procedures regarding the blasting switch, blasting switch attachment plug, and blasting wires that are to be followed when blasting by means of an electrical circuit.

Section 1573.1(b) is proposed for transfer to the GISO in proposed Section 5304 as new subsection (f). This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO.

Subsection (c).

Existing subsection (c) contains requirements pertaining to the use of two-pole attachment plugs, minimum flexible cord wire size, minimum amperage capacity, locking plug and receptacles, and other related electrical safety concerns regarding the electrical connections.

This subsection is proposed for repeal as its provisions are contained in existing Section 5300(a) and (b) and existing Section 5302(a) and (b) of the GISO and therefore, is unnecessary.

Also, this subsection contains two informational “NOTES”. The first “NOTE” exempts portable generators used exclusively for blasting. The second “NOTE” directs the reader to a blasting circuit diagram in Appendix C, Plate C-27. In regards to the first “NOTE”, this “NOTE” is proposed for repeal as it is unnecessary as the regulation is specific to lighting a power circuit. In regards to the second “NOTE”, this “NOTE” is

Initial Statement of Reasons  
Explosives Reorganization

proposed for repeal as it is informational only and directs the reader to the blasting circuit diagram. Therefore, this “NOTE” is unnecessary.

Subsection (d).

Existing subsection (d) requires the keys to the blasting switch be kept by the licensed blaster and states who is to unlock and remain at the switch during circuit testing, repairs or extensions. There are also requirements for re-locking the blasting switch, designating someone to report back to the licensed blaster, surrender of the keys and location of a second set of keys. Section 1573.1(d) is proposed for transfer to the GISO in Section 5299 as new subsection (k). This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1573.1.)**

Section 1573.2. Permanent and Temporary Wiring for Electric Shot Firing.

Subsection (a).

Existing subsection (a) requires that permanent blasting and temporary leading wires are to be single conductor, waterproof, and insulated copper wires with sufficient capacity for the required blasting current. In addition, this subsection states that in no case will the wire be smaller than No. 14 AWG.

This subsection is proposed for repeal as its provisions are contained in existing Section 5302(a) and (d) of the GISO and therefore, is unnecessary.

Subsection (b).

Existing subsection (b) requires that splices be made and connected to conduct electricity and be mechanically secured, effectively insulated, and waterproofed.

This subsection is proposed for repeal as its provisions are already contained in existing Section 5302(e) of the GISO and therefore, is unnecessary.

Subsection (c).

Existing subsection (c) requires that bus wires be not smaller than No. 16 AWG solid copper wire or the equivalent that is recommended by the manufacturer for the expected conditions.

This subsection is proposed for repeal as its provisions are contained in the proposed revisions to existing Section 5302(d) of the GISO and therefore, is unnecessary.

Subsection (d).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (d) requires that firing switches be of the type, condition, and at the location for service intended; requires that they be equipped with double poles and be double throw switch with not less than sixty ampere capacity; and states other requirements to ensure the switch can be locked in specified conditions and other precautions to prevent inadvertent activation which could result in a premature activation.

This subsection is proposed for repeal as its provisions are contained in existing Section 5300(a) and existing Section 5301 of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1573.2.)**

Section 1574. Use of Blasting Machine.

Existing Section 1574 prohibits anyone except the licensed blaster or a blaster in training from operating or making the connections to the blasting machine. In addition, the regulation prohibits circuit-connecting work to be accomplished until all other preparations are completed and all persons are safely located. Machine testing is to be done at intervals determined by the licensed blaster.

This subsection is proposed for repeal as its provisions are contained in proposed Section 5305 of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1574.)**

Section 1575. Blasting with Battery.

Existing Section 1575 prohibits the use of storage and flashlight batteries as a source of electric current for blasting.

Section 1575 is proposed for repeal as its provisions are contained in existing Section 5299(b) of the GISO that is proposed for repeal. The intent of this regulation is contained in proposed Section 5299(b) of the GISO which indicates that only devices designed for initiating electric detonation will be permitted for use; therefore, making the provisions of Section 1575 unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1575.)**

Section 1576. Short-Circuiting Bus Wires and Lead Wires.

Existing Section 1576 requires that blasting cap leg wires be kept short-circuited until connected to the bus wires. In addition, the bus wires are to be shorted until connected

Initial Statement of Reasons  
Explosives Reorganization

to the lead wires. The bare end of the lead wires are to be twisted together until ready for connection to a switch, blasting wires or blasting machine. Also included is a “NOTE” describing how the bus wire connection should be made.

This section is proposed for repeal as its provisions are contained in Section 5299(i) of the GISO. The “NOTE” to Section 1576 is also proposed for repeal as it is a recommendation and informational only. Therefore, this “NOTE” is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1576.)**

Section 1577. Tests.

Existing Section 1577 requires the blasting circuit to be tested prior to firing the shots. Also, this regulation states that a galvanometer designed for blasting work shall be used.

Section 1577 is proposed for repeal as the provisions of this regulation duplicate the requirements of proposed Section 5299(h) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1577.)**

Section 1578. Retreat from and Return to Site.

Subsection (a).

Existing subsection (a) prohibits the connection of lead wires to the permanent shot firing line until all personnel are at a safe location, with the exception of the person making the connection. In addition, this regulation states all unnecessary work at the site will be terminated during and after loading, before the shots are fired.

Subsection (a) is proposed for repeal as unnecessary as the provisions of this regulation duplicate the requirements of Sections 5304(d) and 5305(b) of the GISO.

Subsection (b).

Existing subsection (b) requires a wait of at least 5 minutes before entering the point of blasting when electric blasting. The blasting switches are to be neutralized, locked in the off position, portable cords disconnected and the blasting wires shorted. Upon returning to the site, lead wires are to be disconnected from the end of the shot firing line and the ends shorted together.

The portion of existing subsection (b) requiring at least a five minute wait after electric blasting before returning to the point of blasting is proposed to be transferred to proposed Section 5291 as new subsection (j) of the GISO. This proposed action is necessary as this requirement does not presently exist in the GISO. The provisions of



Initial Statement of Reasons  
Explosives Reorganization

this subsection that address locking of the switch, disconnecting the portable cord, and shorting the blasting wires are proposed for transfer to Section 5304(f). This proposal is necessary as these provisions currently do not exist in the GISO. The provision of this subsection that requires lead wires be disconnected from the end of the permanent shot firing line is proposed for repeal as this provision is addressed in Section 5305(c) and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1578.)**

Section 1579. Electric Blasting in Proximity With Radio Transmitters.

Subsection (a).

Existing subsection (a) requires that electric blasting caps be retained in their original shipping containers or connected up for use within the specified distances contained in Appendix B, Plate B-15, Tables 1 through 5.

This subsection is proposed for repeal as its provisions are contained in proposed Sections 5262(e) and 5306(c) of the GISO and therefore, is unnecessary.

Subsection (b).

Existing subsection (b) states that electric blasting caps are not to be transported in any vehicle equipped with a radio telephone or other radio transmitter unless they are still packed in their original container or in a metal covered box.

This subsection is proposed for repeal as its provisions are contained in proposed Section 5262(b) of the GISO and therefore, is unnecessary.

Subsections (c) through (e).

Existing subsections (c) through (e) contain the requirements for signing the approaches to areas where electric blasting operations are underway; where the signs are to be posted on public access; and the tables of distances for mobile and fixed radio, radar and television transmitters.

The provisions of subsection (c) regarding sign readings are proposed for transfer into existing Section 5306(a) of the GISO. This proposal ensures retention of the existing CSO regulation within the GISO. The other provisions of subsection (c) regarding the specific color of the letters, the height of the letters, the size of the stroke of the letters, and the color of the sign's background are proposed for repeal. These provisions are already specified in the GISO that contains the uniform specifications of the color and size of the letters and the color of the sign's background, specifically, Sections 5258(e), 5266(d), 5267(c), 5346(b), 5348(i), 5312(m), 5314(d), and 5347(c). This proposal will

Initial Statement of Reasons  
Explosives Reorganization

eliminate the conflict between the other existing regulations regarding signage requirements.

Subsections (d) and (e) are proposed for repeal. These provisions are contained in proposed Section 5306(b) and (c) and the accompanying Tables 1 through 5 of the GISO and therefore, are unnecessary.

A “NOTE” to subsection (c) refers the reader to the State Department of Transportation, Manual of Traffic Controls for specific sign requirements. This “NOTE” is proposed for repeal as it is informational only and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1579.)**

Section 1580. Electrical Storms.

Existing Section 1580 prohibits electric blasting or preparation for blasting during an electrical storm and also states that all workers are to be removed from the site if loading is in progress when the storm arrives. In addition, this section states that provisions are to be made to warn crews when an electrical storm is approaching. A “NOTE” stating that an AM radio may be helpful to check on an approaching storm follows the regulation.

The first portion of this regulation pertaining to work during electric storms is proposed for repeal as its provisions are contained in proposed Section 5245(a) of the GISO and therefore, is unnecessary. In addition, the latter portion of this regulation is proposed for transfer to proposed Section 5245 as new subsection (b). This proposed action is necessary to ensure retention of the existing CSO regulation within the GISO.

As stated above, the “NOTE” is proposed for repeal as it is informational only and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 1580.)**

Appendix B, Plate B-14, Table 1.

Table 1 is the American Table of Distances for Storage of Explosive Materials. This table contains the parameters for the storage of explosive materials for specified quantities, when barricaded or unbarricaded, from inhabited buildings, public highways, passenger railways, and other explosive materials storage magazines.

It is proposed to transfer Table 1 and rename it as Table EX-1 for consistency and to replace the existing Table EX-1 of the GISO with the CSO table, as the CSO table is the latest published table of distances. This proposed transfer and substitution is necessary as this is the latest published version of the table of distances utilized by the Bureau of

Initial Statement of Reasons  
Explosives Reorganization

Alcohol, Tobacco and Firearms, the lead agency for the enforcement of explosive storage regulations.

Appendix B, Plate B-14, Table 2.

Table 2 requires specified barricade thickness between different quantities of ammonium nitrate and blasting agents.

This table is proposed for repeal as it duplicates the existing Table EX-2 in Section 5253 of the GISO and therefore, is unnecessary. The existing Table EX-2 in Section 5253 of the GISO is proposed for transfer to Section 5252 of the GISO to follow Table EX-1.

Appendix B, Plate B-14a.

Plate B-14a shows the types of storage facilities where classes of explosive materials may be stored.

It is proposed to revise Plate B-14a for clarity and transfer it into the GISO as proposed Table EX-3. Proposed Table EX-3 of the GISO contains additional information showing that Class A, B, and C Explosives can be classified as either high or low explosives. This information is necessary to assist employers in determining the type of explosive materials' storage facility needed for their operations.

Appendix B, Plate B-15, Tables 1 through 5.

Appendix B, Plate B-15, Tables 1 through 5 contain minimum distance requirements for conducting electrical blasting operations in the vicinity of fixed and mobile radio, television, and radar transmitters.

These tables are proposed for repeal. These provisions are already contained in Section 5306, Blasting in Proximity with Radio Transmitters, and accompanying Tables 1 through 5 of the GISO and therefore, are unnecessary.

Appendix C, Plate C-26-a

Plate C-26-a contains recommended methods of attaching capped fuse to primer cartridges. There are two drawings, one showing a string tie method and the other showing a laced method. This plate is proposed for repeal as these drawings duplicate what is in Section 5297, Making Capped Fuses and Primers, of the GISO and therefore, is unnecessary.

Appendix C, Plate C-27

Plate C-27 contains a blasting circuit diagram.

This diagram is proposed for transfer into Section 5302 of the GISO with a minor terminology revision to provide a third example of a blasting circuit. This proposed

Initial Statement of Reasons  
Explosives Reorganization

transfer and minor revision to revise the word “shots” to “detonators” are necessary as this proposal retains an existing CSO example of a blasting circuit diagram in the GISO and provides consistent industry terminology.

## **Subchapter 7. General Industry Safety Orders.**

This proposal consolidates the explosive regulations from the Construction Safety Orders, Mine Safety Orders, and Tunnel Safety Orders into one location in the General Industry Safety Orders, making it more convenient for the user.

### **Group 18. Explosives and Pyrotechnics.**

It is proposed to substitute the term "Explosive Materials" for the existing title of Group 18 as this term includes all explosives, including pyrotechnics.

### **Article 113. Explosive Materials and Pyrotechnics.**

It is proposed to delete the reference to the phrase "and Pyrotechnics" as the term "Explosive Materials" includes pyrotechnics.

#### **Section 5236. Purpose.**

##### **Subsection (a).**

Existing subsection (a) indicates that Group 18 establishes minimum standards for the manufacture, assembly, possession, storage, transportation, and use of explosive materials and pyrotechnics at places of employment.

It is proposed to include the phrase "repacking and distribution" as companies that repackage and/or distribute explosive materials often have exposure to the same hazards as those associated with the manufacture of explosive materials. The inclusion of the phrase "repacking and distribution" is necessary to mitigate the hazard of explosions or fires that could result in the death or serious injuries of employees. In addition, it is proposed to delete the reference to the phrase "and pyrotechnics" because the term "explosive materials" includes pyrotechnics and therefore, the reference to the term "pyrotechnics" is unnecessary.

##### **Subsection (b).**

Existing subsection (b) contains exceptions to the Group 18 regulations.

Existing subsection (b)(2) exempts transportation of explosive materials under the jurisdiction of the US Department of Transportation (USDOT) and where the USDOT regulations are enforced by the California Highway Patrol.

A revision is proposed to subsection (b)(2) to delete the phrase "or pyrotechnics" as the reference to the word "pyrotechnics" is unnecessary because the term "Explosive Materials" includes pyrotechnics. Also, it is proposed to include references to the permit sections of the Health and Safety Code and the California Vehicle Code to specify what

## Initial Statement of Reasons Explosives Reorganization

Codes apply. In addition, a revision is proposed to delete the reference to “and where USDOT regulations are enforced by” as this statement is vague and ambiguous and therefore, unnecessary.

It was determined by the advisory committee convened for the reorganization of the explosive safety orders that the revisions to Group 18 adopted in 1997 did not accurately address the areas of enforcement by the California Highway Patrol (CHP) with respect to the transportation of explosive materials. For this reason, it is proposed to reinsert the references to the Health and Safety Code and the California Vehicle Code to clearly indicate who enforces permit provisions relating to the transportation of explosive materials and where the regulations for these provisions may be found.

Existing subsection (b)(4) exempts construction or tunnel projects from these orders.

It is proposed to delete the exemption for construction and tunneling projects from the requirements of the General Industry Safety Orders to reflect the deletion and/or transfer of the storage, transportation, and use requirements from the Construction, Mining and Tunneling Safety Orders. This proposal will result in the consolidation of all explosive safety orders into the General Industry Safety Orders making it more convenient for the user.

### Section 5237. Definitions.

Existing Section 5237 contains definitions of terms used within the GISO regulations to ensure the devices and/or processes addressed within the regulations are clearly defined and understood.

It is proposed to revise Section 5237 to propose new definitions and definitions new to the GISO that are proposed for transfer from the CSO, MSO, and/or TSO; to revise existing definitions; and to repeal definitions to reflect changing industry practices, technology, terminology, or classification of materials. This proposal includes new definitions to the GISO, clarifies existing regulations, and removes definitions no longer applicable to the explosives industry.

The following are proposed **new** definitions: Air Loader (transferred from existing Section 1504 of the CSO and existing Section 6958 of the MSO); Air Supply Lines (transferred from existing Section 6958 of the MSO and existing Section 8405 of the TSO); ATF; Binary Components; Blast Site; Bus Wires; Car; Deflagration; Detonation; Emulsion; Face or Bank (new definition to the GISO and contained in the MSO); Face – Underground (new definition to the GISO and contained in the MSO and the TSO); Fume Classification (refer to existing Section 5244 of the GISO, existing Section 7206 of the MSO, and existing Section 8510 of the GISO); IME; Loading Hose (transferred from existing Section 6958 of the MSO and existing Section 8405 of the TSO); Loading Line (transferred from existing Section 6958 of the MSO and existing Section 8405 of the TSO); Loading Tube (transferred from existing Section 6958 of the MSO and existing Section 8405 of the TSO); Mudcapping (transferred from existing Section 6958 of the

Initial Statement of Reasons  
Explosives Reorganization

MSO and existing Section 8405 of the TSO); Permanent Blasting (Leading) Wires; Permissible (new definition to the GISO and contained in the MSO and the TSO); Pneumatic Loading; Processing; Propagation (Sympathetic Detonation); Remote Operation; Safety (Blast) Shield (transferred from “Operating Shield” in existing Section 5237 of the GISO); Sensitizer; Special Effects; Static Dissipating (transferred from existing Section 6958 of the MSO and existing Section 8405 of the TSO); Trackless Vehicle; and, Train.

**Revisions** are proposed to the following existing definitions: ANFO; Barricade-Artificial; Barricaded; Blast Area; Blaster; Blasting Accessories; Blasting Agent; Blasting Cap (transferred and revised under “Detonator, (1) Fuse Caps” in Section 5237 of the GISO); Blasting Circuit; Blasting Machine; Blasting Operation; Bullet Resistant; Cap Crimper; Competent Person; Detonating Cord; Detonator; Electric Blasting Cap (transferred under “Detonator” in Section 5237 of the GISO); Electric Delay Blasting Caps (transferred under “Detonator” in Section 5237 of the GISO); Nonelectric Delay Blasting Cap (transferred under “Detonator” in Section 5237 of the GISO as “Shock Tube, Gas Initiation, or Miniaturized Detonating Cord Blasting Caps”); Explosive Materials; Explosives; Fireworks; Forbidden or not Acceptable Explosives; Fuse Safety; Highway; Igniter Cord; Special Industrial Explosive Devices; Special Industrial Explosive Material; Inhabited Building; Intraline Distance; Leading Wires; Magazine; Missed Hole; Operating Building; Primary Blasting; Primer; Propellant; Propellant-Actuated Power Devices; Pyrotechnics; Secondary Blasting; Slurry Explosives (transferred with revisions from existing Section 6958 of the MSO and existing Section 8405 of the TSO); Small Arms Ammunition; Springing; Squib-Electric; Stemming Material; Underground; and, Water Gels.

The following definitions are proposed for **repeal**: Chlorate Explosives (transferred under “Explosives Chlorate” in Section 5237 of the GISO); Division; Nitro-Carbo-Nitrate; Operating Shield (transferred under “Safety (Blast) Shield” in Section 5237 of the GISO); and, Tramway.

**(The corresponding definitions are identified in the right hand column of the text of Section 5237.)**

Section 5238. Minors.

Existing Section 5238 [provisions are contained in existing Section 7200 of the MSO and existing Section 8505 of TSO] contains provisions regarding the employing of persons under the age of eighteen years for handling, transporting or engaging in activities using explosives.

The Labor Code, Section 1294 contains restrictions regarding the use of minors within industries using hazardous materials. Therefore, this regulation is proposed for repeal as it is unnecessary. A new proposed regulation is proposed to be substituted in Section 5238 entitled, "Competency and Qualifications of Blasters", is necessary to comply with Labor Code, Section 7990 that requires the Division to determine qualifications for

Initial Statement of Reasons  
Explosives Reorganization

persons seeking an "explosive blaster's license."

Subsections (a) and (b) and New Subsections (c) – (d).

The provisions of existing Section 1550(a), (b), (c)(NOTE), and (e) of the CSO; existing Section 7275(a), (b), and (c), existing Section 7276(b), and existing Section 7279(a) of the MSO; and existing Section 8560(a), (b), and (c) of the TSO, are proposed for transfer into the General Industry Safety Orders with revisions to provide clarity.

These new subsections are necessary to ensure that blasting operations are accomplished by a licensed, qualified individual with the language skill, physical capabilities, and experience necessary to safely perform the required tasks, as mandated by the Labor Code. In addition, the proposed transfer of these provisions presently contained in the Construction, Mine, and Tunnel Safety Orders into the General Industry Safety Orders is necessary as all explosives regulations are proposed for repeal from the CSO, MSO, and TSO as a result of the proposed reorganization of the explosive safety orders.

New Subsection (e).

New subsection (e) is necessary to ensure the Division is able to verify that the blasting operation is under the supervision of a licensed blaster. The provisions of proposed subsection (e) are presently contained in existing Section 1550(f) of the CSO, existing Section 7279(b) of the MSO, and existing Section 8564(b) of the TSO, which are proposed for repeal, as the result of the proposed reorganization of the explosive safety orders.

New Subsection (f).

New subsection (f) is necessary to inform those persons considering to apply for a blaster's license the necessary minimum qualifications. The provisions of proposed subsection (f) are presently contained in existing Section 7276(a) and (c) of the MSO and existing Section 8561(a) and (c) of the TSO, which are proposed for repeal, as the result of the proposed reorganization of the explosive safety orders.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5238.)**

Section 5239. Training.

Existing Section 5239 [provisions are contained in existing Section 7201 of the MSO and existing Section 8506 of the TSO] requires all persons who handle or transport detonators or explosives to be trained in the hazards of the job and in the safe performance of their duties. It also requires that trainees be under the direct supervision of a competent person.



Initial Statement of Reasons  
Explosives Reorganization

Revisions are proposed to the title of Section 5239 to include the phrase "and Trainees" to clearly indicate those affected by this regulation that the regulation is proposed to be specific to trainees conducting blasting operations.

The substitution of the term "explosive materials" for "detonators" is proposed to be consistent with current industry terminology. Also, it is proposed to include the phrase "conducting blasting operations" following the word "Trainees" in the second sentence as the regulation is proposed to clarify when the trainee is to be under the direct supervision of a licensed blaster. In addition, it is proposed to require the trainee to be under the supervision of a licensed blaster in lieu of a competent person. This proposal is necessary as the Labor Code, Section 6710 requires blasting operations to be under the direct supervision of a licensed blaster.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5239.)**

Section 5240. Deteriorated Explosives.

Existing Section 5240 requires deteriorated, damaged or scrap explosives unfit for use be destroyed in a safe place by a competent person. The explosive is never to be buried. [Similar provisions are proposed for transfer from existing Section 1572(b) of the CSO, existing Section 5241(c) of the GISO, existing Section 7202 of the MSO, and existing Section 8507 of the TSO.] The title is proposed for revision to read "Disposal of Explosive Materials" which clearly states the content of the regulation.

Subsection (a).

It is proposed to codify the existing introductory text as subsection (a).

The inclusion of contaminated explosive materials is necessary to recognize that the inadvertent mixing of foreign materials with explosive materials can result in a product that would need destruction. Also, it is proposed to include the term "desensitized" to address an alternative method for mitigating a potentially hazardous condition in lieu of outright destruction of the explosive material. The term "frozen" is proposed for transfer from Section 5241(c) as it is not industry practice to explode materials that have been frozen. The inclusion of the phrase "or otherwise made safe" is necessary to recognize that there are methods for mitigating hazards that may be possible without desensitizing or destroying the explosive materials.

The statement in proposed subsection (a) relating to the U. S. Bureau of Mines and the Institute of Makers of Explosives is proposed for repeal as being unnecessary. The competent person is required to have the necessary knowledge/experience to safely dispose of the affected explosive materials.

## Initial Statement of Reasons Explosives Reorganization

In addition, existing subsection (a) states that explosives shall never be buried or covered over by any materials as a means of disposal.

It is proposed to substitute the term “EXPLOSIVE MATERIALS” in place of the word “EXPLOSIVES”. This proposal is necessary to reflect terminology commonly used in the industry.

### New Subsections (b)-(d).

It is proposed to transfer Section 5331(a), (c), and (d) of the GISO into Section 5240(b) – (d), respectively, to consolidate the explosive materials disposal regulations into one convenient location.

Proposed subsection (b) [transferred from existing Section 5331(a) and revised for clarity] provides a listing of areas where the disposal of explosive materials is prohibited to prevent damage to public and private property and possible injuries to persons and/or employees. This proposal is necessary to ensure the employer/competent person knows and maintains the recommended safe distances during disposal operations.

Proposed subsection (c) [transferred from existing Section 5331(c) and revised for clarity] is necessary to ensure a protective shelter or other adequate protection for employees is provided at a disposal area in the event an unexpected rapid burn (explosion) of explosive materials occurs, causing a potentially hazardous condition to develop which would result in bodily harm to the employee(s).

Proposed subsection (d) [transferred from existing Section 5331(d) and editorially revised] requires a warning device to alert persons when a disposal operation is in progress. This proposal is necessary to ensure that persons are made aware of a hazardous operation in progress.

### New Subsection (e).

Proposed subsection (e), as recommended by the advisory committee, is necessary to ensure that transportation methods/equipment is equipped or provisions made so that static electricity cannot be generated or, if generated, is safely dissipated to prevent materials that are "electric sensitive" from being ignited or caused to explode.

### New Subsection (f).

Proposed subsection (f), as proposed by the advisory committee, is necessary because some explosive materials will react when exposed to specific chemicals contained in other explosive materials. Unwanted ignition could result where mixing or contact occurs, causing a fire or explosion with possible employee injuries.

### New Subsection (g).

Initial Statement of Reasons  
Explosives Reorganization

Proposed subsection (g) [transferred from existing Section 5331(b) of the GISO and editorially revised] is necessary to ensure waste explosive materials are not placed in an area where heat from a previous burn could ignite and/or detonate the waste material prematurely. A premature detonation could result in injury or death to the persons handling the waste materials.

New Subsection (h).

Proposed subsection (h) [transferred from existing Section 1570(b) of the CSO] is necessary to ensure bags that once contained ammonium nitrate are not piled near or stored in wooden buildings. Such bags are highly flammable and, if a fire were to occur, would burn with such intensity a secondary explosion could result and control of the fire would not be possible.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5240.)**

Section 5241. Explosives for Blasting.

Subsection (a).

Existing subsection (a) [provision is contained in existing Section 7203(a) of the MSO and existing Section 8508(a) of the TSO] contains a provision against the use of chlorate explosives in blasting operations.

Subsection (a) is proposed for revision to include “Perchlorate high” explosives, as well as Chlorates, in the prohibition for use as a blasting agent.

Perchlorate based high explosive materials are considered moderately explosive, but like Chlorate based explosives, are very sensitive when mixed with specific materials or when they become contaminated with carbonaceous materials. Therefore, Perchlorate high explosives are too unstable to be used as blasting agents. For this reason, it is proposed to prohibit the use of Perchlorate high explosives in blasting operations and to include Perchlorate high explosives, as well as Chlorates, in subsection (a). It is also proposed to include the term "high" to further define those Chlorate and Perchlorate high explosives prohibited for blasting operations.

This proposal is necessary for clarity and to be consistent with industry terminology and to prohibit the use of potentially unstable materials for blasting operations. The portion of the regulation stating "... Explosives: Chlorate ..." is proposed for repeal as being unnecessary.

Subsection (b).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) [provision is contained in existing Section 7203(a) of the MSO and existing Section 8508(a) of the TSO] requires that low freezing explosives be of a type that will not freeze at any temperature that may reasonably be expected.

This subsection is proposed for revisions to editorially revise the syntax of the regulation for consistency and to delete the word “any” as an unnecessary modifier

Subsection (c).

Existing subsection (c) [provision is contained in existing Section 7203(c) of the MSO and existing Section 8508(c) of the TSO] recommends that the employer should contact the explosive materials manufacturer before using or attempting to thaw frozen explosives.

This statement is advisory only and therefore, is unenforceable. It is proposed to repeal subsection (c) as being unnecessary. The handling of frozen explosives is contained in proposed Section 5240(a) of the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5241.)**

Section 5242. Water Gels.

Existing Section 5242 [provisions are contained in existing Section 7204 of the MSO and existing Section 8509 of the TSO] requires that water gels containing an explosive be classified as an explosive; water gels containing no explosives which are cap sensitive be classified as an explosive, and be manufactured, transported, stored and used as specified for explosives; and water gels containing no substance in itself classified as explosives, and, which are not cap sensitive, be classified as blasting agents, to be manufactured, transported, stored and used as required for blasting agents.

Subsection (a).

Water gels containing an explosive are classified and handled and transported in the same manner as explosives. The same is true of water gels that are cap sensitive, as addressed in existing subsection (b). These explosive materials are also to be treated as explosives. Under certain conditions, either explosive materials formulation could mass detonate. For this reason, it is proposed to combine similar requirements of subsections (a) and (b) to include the terms "Cap sensitive water gels" and “and those”, and to add the term "high explosives" into the requirements of subsection (a) and to editorially delete the word “an”.

The proposed revisions are necessary to clarify the two types of water gels, one for cap sensitive water gels treated as a high explosive and the other as non cap sensitive water gels treated as a blasting agent and also to combines similar requirements of subsection (b).

Initial Statement of Reasons  
Explosives Reorganization

Subsection (b).

Existing subsection (b) contains requirements similar to those in subsection (a) and therefore, is proposed for transfer into subsection (a) of Section 5242. This proposal is necessary to combine similar requirements.

Subsection (c).

Existing subsection (c) states that water gels containing no substance in itself classified as an explosive and which are not cap-sensitive as defined in Section 5237 under “Blasting agents” shall be classified as blasting agents and manufactured, transported, stored, and used as specified for blasting agents in this article.

It is proposed to revise subsection (c) to include reference to Article 120 that contains requirements for mixing blasting agents. This proposal is necessary as Article 120 also covers the manufacturing of water gels.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5242.)**

Section 5243. Black Powder Blasting.

Existing Section 5243 [provisions are contained in existing Section 7205 of the MSO] contains specific requirements for the precautions necessary when using black powder for blasting.

New Subsection (a).

Editorial revisions are proposed to renumber the subsections and to make the regulation gender neutral in subsections (a)(1), (a)(2), and (a)(3).

It is proposed to include the term “licensed blaster” in subsection (a)(2) to be consistent with Labor Code, Section 7990 that requires the use of explosives to be limited to persons licensed by the Division and the Division’s Administrative regulation, Section 344.20 that already require blasters to be licensed by the Division.

It is proposed to substitute the generic term "fires" for "bonfires" in subsection (a)(5) to recognize all fire related sources of ignition are prohibited within 500 feet of any black powder not stored within a magazine.

Subsection (a)(8) is proposed for revision to include a prohibition for construction blasting. This proposal is necessary to ensure the existing prohibition located in existing Section 1565(n) of the CSO for black powder blasting is retained and specified in Section 5243(a)(8). The explosive reorganization will result in the repeal or transfer to the GISO of all of the explosive regulations contained in the CSO explosive regulations.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5243.)**

Section 5244. Explosives for Underground Use.

Existing Section 5244 [provisions are contained in existing Section 7206 of the MSO and existing Section 8510 of the TSO] contains the specifications for determining fume classification for explosives used underground.

Subsections (a), (b), and (c).

Existing subsection (a) requires that the explosives be classified according to the volume of oxygen, carbon monoxide, and hydrogen sulfide produced by a standard cartridge. Existing subsection (b) describes a standard cartridge. Also, this subsection states that where explosives are not packed in a standard cartridge for testing, then the volume must be comparable to that contained in a standard cartridge. Existing subsection (c) requires that the necessary test be performed in a Bichel Gauge according to the standard procedure of the U.S. Bureau of Mines.

The proposed repeal of subsections (a) and (b) is necessary to eliminate duplicative regulations. The information repealed, including the reference to Bichel Gauge, is contained in existing subsection (c), proposed subsection (a). In addition, the federal agency reference is proposed for revision to note the correct designation for the federal agency, the Mine Safety and Health Administration or MSHA, as opposed to the U.S. Bureau of Mines. Also, the proposed phrase "made to determine the fume class as shown in the following table" is necessary to reflect the proposed transfer of the table for fume classes from existing subsection (d) to proposed subsection (a). In addition, it is proposed to include the phrase "for 'toxic gas test'" as the "toxic gas test" method of the Mine Safety and Health Administration (MSHA) is the current practice in determining fume classes.

The proposed new heading "Cubic Feet of Toxic Gases Per (1-1/4" x 8") Cartridge of Explosive Material" for the table in proposed subsection (a) [provisions that are currently contained in existing subsection (b) of Section 5244] is necessary to indicate the intent of the table, units for the limits poisonous gases released per cartridge, and the size of the standard cartridge used for the test. These heading/title elements are also necessary because any references to these specific elements are currently contained in existing subsections (a) and (b) that are proposed for repeal. The absence of this information would render the regulation unclear.

Subsection (d).

Existing subsection (d) requires that the volume of carbon monoxide plus hydrogen sulfide produced be expressed in terms of cubic feet per standard cartridge with exceptions. A table is shown specifying the appropriate fume classes.

Initial Statement of Reasons  
Explosives Reorganization

The provisions of subsection (d) are proposed for transfer into the table in proposed subsection (a). This proposal is necessary to consolidate similar requirements into one location and to eliminate duplicative provisions.

Subsection (e).

Existing subsection (e) is specific as to when an explosive can be classified as a Fume Class 1 explosive.

This subsection is proposed for transfer to proposed subsection (a) as the requirements of this subsection are to be incorporated into the proposed revisions of proposed subsection (a). This proposal is necessary to consolidate similar requirements into one location and to eliminate duplicative provisions.

Subsection (f).

Existing subsection (f) requires the containers of fume class explosive be identified and marked with specific size letters.

This subsection is proposed for repeal as being unnecessary. The regulations pertaining to the transportation of explosives as required by the U.S. Department of Transportation are specific that the containers be clearly marked/identified as to the contents.

Subsection (g).

Existing subsection (g), proposed subsection (b), contains an exception to the Fume Class I use requirements.

The proposed editorial revisions to proposed subsection (b) to reference subsections (c) and (d) in lieu of subsections (h) and (i) are necessary because of the proposed repeal of existing subsections (a), (b), (d), (e), and (f), as mentioned above, and the re-codification of the remainder of the section. It is also proposed to delete the phrase “of this section” as this phrase is unnecessary.

New Subsection (c).

A new subsection (c) is proposed to require that blasting with Fume Class 1 explosive be discontinued when the concentration of combustible dust or vapor is found to exceed 10% of the lower explosive limit.

New subsection (c) is necessary to address the requirements of Labor Code, Section 7967, that whenever gas levels in excess of 10% of the lower explosive limit are initially encountered loading and blasting operations using Fume Class I explosive materials are to be halted. This proposal, in conjunction with the proposed revisions to subsection (h), proposed subsection (d), in which the reference to the Division is proposed for repeal,

Initial Statement of Reasons  
Explosives Reorganization

will permit the employer to determine when permissible explosives may be used and additional ventilation initiated.

Subsection (h).

Existing subsection (h), proposed subsection (d), is both subjective and permissive in that when the Division has reason to believe that Fume Class 1 explosives may endanger employees by igniting combustible dusts or vapors, they may require the use of permissible explosives provided the ventilation is increased to compensate for the resulting poisonous gases.

Revisions are proposed to repeal the reference to the Division, to require the use of permissible explosives, and to include the term "toxic" to ensure all negative byproducts of an explosive material are considered when determining ventilation requirements. An editorial revision to substitute the term "igniting" for "ignition of" is necessary for clarity. In addition, the proposed substitution of the mandatory word "shall" for the permissive phrase "it may require that" is necessary to ensure permissible explosive materials are used when there is the danger of Fume Class 1 explosive materials igniting combustible dusts or gases, and that the ventilation is increased to compensate for the increased poisonous and toxic gases.

This proposal is necessary to permit the employer to use the expertise of their on-site safety representative to determine if the change to permissible explosives is necessary.

The NOTE to this subsection explains why permissible explosives are used where combustible dust or vapors are present. It also states that when permissible explosives are used, additional ventilation is to be provided.

It is proposed to include the term "toxic" to ensure all negative byproducts of an explosive material are considered when determining ventilation requirements. In addition, it is proposed to repeal the requirement for additional ventilation from the NOTE as subsection (h), proposed subsection (d), already contains this requirement and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5244.)**

Section 5245. Electric Detonation of Explosives During Lightning and Dust Storms.

Proposed revisions to the title of Section 5245 are necessary to delete the reference to "Electric Detonation of Explosives" and to insert the generic term "Blasting Operations" to address all types of blasting operations. The term "electric detonation" is unclear as to the type of blasting to be conducted, electric initiated blasting, or unwanted initiation caused by static electricity or lightning. Also, it is a known fact within the industry that static electricity generated by dust storms or lightning storms can easily initiate a



Initial Statement of Reasons  
Explosives Reorganization

conflagration involving non-electric blasting explosive materials as well as electric initiated blasting explosive materials.

The existing regulations of Section 5245 are currently contained in existing Section 7207 of the MSO and existing Section 8511 of the TSO.

Subsection (a).

Existing subsection (a) prohibits electric blasting caps or static sensitive explosives blasting operations to take place during a lightning storm.

A revision is proposed to subsection (a) to delete the phrase “and progress” as this phrase is unnecessary. When noting an approaching storm, work is to be terminated. It is proposed to include “dust” storms as a concern in proposed subsection (a). The provisions of “dust” storms are contained in existing subsection (b) and are proposed for transfer to subsection (a) to consolidate similar requirements into one location. It is proposed to delete the reference to electric blasting caps or static sensitive explosives as all blasting operations should be discontinued. Any explosive materials may ignite or detonate when subjected to the voltage generated and released in a lightning or dust storm. Finally, it is proposed to include the word “blast” before the word “area” to specify the area for clarity.

Subsection (b).

Existing subsection (b) requires the termination of activity when a dust storm capable of producing sufficient static electricity to detonate electric blasting cap is approaching.

Subsection (b) is proposed for transfer into subsection (a) to consolidate similar requirements into one location.

New Subsection (b).

New subsection (b) clearly indicates that provisions are to be made to warn the blasting crew when an electric or dust storm is approaching.

Proposed subsection (b) is necessary to require the employer to provide a method for warning the blasting crew when an electric or dust storm is approaching. The provisions of proposed subsection (b) are presently contained in existing Section 1580 of the CSO, which is proposed for repeal, as the result of the proposed reorganization of the explosive safety orders.

Subsection (c).

Existing subsection (c) states that instrumentation to determine the presence of static electricity may be required by the Division.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (c) is permissive in nature. The permissive portion of this subsection is unenforceable and therefore, is proposed for repeal. The remaining provision of this subsection is proposed for transfer to proposed subsection (c) to consolidate similar requirements into one location.

New Subsection (c).

New subsection (c) requires employers/licensed blasters in underground operations to provide instrumentation to determine the presence of static electricity within 15 miles of the portal and a means provided to signal to the underground blasting site.

Proposed subsection (c) is necessary to ensure that instrumentation is provided to signal to the underground blasting site when there is accompanying static electricity within 15 miles of the portal caused by lightning and dust storms. Static electricity could put the operation and the safety of the employees in jeopardy by igniting a set charge or charges. The provisions of proposed subsection (c) are presently contained in existing Section 5245(c), existing Section 7207(c) of the MSO, and specifically existing Section 8511(c) of the TSO, which are proposed for repeal, as the result of the proposed reorganization of the explosive safety orders.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5245.)**

Section 5247. Miscellaneous Provisions.

Subsection (a).

Existing subsection (a) prohibits handling, storing or transporting explosives or blasting agents unless a valid permit has been issued by the appropriate federal, state or local agency.

The reference to "blasting agents" is proposed for repeal and replaced with the term "explosive materials" as the definition of explosive materials includes blasting agents.

Subsection (b).

Existing subsection (b) [provisions are contained in existing Section 1550(d) of the CSO] prohibits persons from using or handling explosives while under the influence of intoxicating liquors, narcotics, or dangerous drugs.

Subsection (b) is proposed for revisions for clarity through the substitution of the term "employee" for "person", "explosive materials" for "explosives", "alcohol" for "intoxicating liquors", and to delete the word "dangerous" which comes before the word "drugs". It is also proposed to insert the phrase "be permitted to" and the phrase "that cause drowsiness or other side effects which could cause the employee to perform

Initial Statement of Reasons  
Explosives Reorganization

duties/function in an unsafe manner" to clearly indicate that no employee is to handle or use explosive materials while physically or mentally impaired.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5247.)**

New Section 5248. Blasting Accident Report and Procedures.

New Section 5248 is proposed containing the following criteria that requires the employer to establish a reporting procedure to be used in the event of a blasting accident or an occurrence that affects the safety of employees.

The requirements of this proposed section are presently contained and transferred from existing Section 1555(a) and (b) of the CSO, existing Section 7280(a) through (c) of the MSO, and existing Section 8565(a) through (c) of the TSO. Due to the proposed reorganization and consolidation into the General Industry Safety Orders of the explosive regulations, this proposal is necessary to ensure that a blasting operation reporting requirement and procedure is maintained within the GISO regulations.

Subsection (a).

New subsection (a) [transferred from existing Section 1555(a) of the CSO, existing Section 7280(a) of the MSO, and existing Section 8565(a) of the TSO] is necessary to ensure that in the event of a blasting accident or unusual occurrence involving explosive materials, whether or not a personal injury is sustained, the employer shall submit a report to the Division within 24 hours.

New Subsection (b).

New subsection (b) [transferred from existing Section 1555(a) of the CSO, existing Section 7280(b) of the MSO, and existing Section 8565(b) of the TSO] is necessary to ensure that the report contains specific data regarding the blasters involved, employees injured, explosives and method(s) of detonation, and an account the incident.

New Subsection (c).

New subsection (c) [transferred from existing Section 1555(b) of the CSO, existing Section 7280(c) of the MSO, and existing Section 8565(c) of the TSO] is necessary to ensure that the employer terminates blasting operations where serious personal injury is sustained until the Division completes its investigation or authorizes resumption of work.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5248.)**

Article 114. Storage of Explosives.

Initial Statement of Reasons  
Explosives Reorganization

The title to Article 114, "Storage of Explosives", is proposed for revision to substitute the term "explosive materials" for "explosives." This proposal is necessary to be consistent with the proposed revisions throughout the Group 18 regulations.

Section 5251. Storage--General Requirements.

The proposed substitution of the phrase "General Requirements" with the phrase "of Explosive Materials" is necessary to be consistent with the proposed revisions to Section 5251. It is proposed that Section 5251 specifically address the storage requirements for explosive materials.

Subsection (a).

Existing subsection (a) requires that all explosives, including special industrial high explosives, are to be stored in a first or second-class magazine. The magazine is to be constructed in conformance with the provisions of this Article.

Revisions are proposed to subsection (a) to substitute the word "explosives" with the term "explosive materials" to reflect language presently used by the industry; to repeal the reference to "special" in regards to industrial high explosives; and to delete the specific references to the first and second class magazines to be replaced with "the appropriate" magazine with a reference to a new table containing the same requirements, in addition to information regarding blasting agents and the USDOT and ATF explosive classifications.

It is proposed to delete the reference to "special" in regards to industrial high explosives as "special" is an unnecessary modifier. In addition, it is proposed to substitute "the appropriate" magazine" with a reference to proposed new Table EX-3 of the GISO [transferred and revised from Appendix B, PLATE B-14a of the CSO] in place of references to specific class magazines as the references throughout the explosive materials regulations are being revised to address "types" rather than classes of magazines. In addition, proposed Table EX-3 is a convenient compilation of this data.

Subsection (b).

Existing subsection (b) requires that any quantity of explosives over 100 pounds is to be stored in a first class magazine. Also, subsection (b) lists five exceptions for specific explosive devices and a note stating the listed materials are to be kept in their shipping containers.

Revisions are proposed to subsection (b) to repeal the reference to the quantity of explosives in excess of 100 pounds; and to repeal the exception statement and in its place to transfer the existing "Note" as new subsection (b), to add clarifying language and to make it a preamble to items (1) - (5) into a list of explosive materials covered by subsection (b).

## Initial Statement of Reasons Explosives Reorganization

Existing subsection (b) is proposed for revision to eliminate duplicative storage requirements. Storage requirements are proposed to be addressed in the proposed revisions to subsection (a) of Section 5251 that requires explosive materials to be stored as required by Table EX-3 and ensures the listed items are maintained in their shipping containers until used. Also, new subsection (h) of Section 5251 contains new quantity and storage restrictions based on the new USDOT and ATF classifications. In addition, new subsection (i) of Section 5251 prohibits the storage of more than 110 pounds of explosive materials in a Type 3 magazine (i.e., day box).

### New Subsection (b).

Included following the existing exceptions to subsection (b) is a “Note” that contains a requirement that the exempted materials are to be maintained in their shipping containers until used.

It is proposed to revise this requirement to clearly indicate its intent to read “The following materials/devices shall be kept in their shipping containers until used.” and to transfer this requirement to new subsection (b) of the preamble to the covered materials.

### Subsection (b)(1).

Existing subsection (b)(1) states that Class C explosive such as explosive power packs in the form of explosive cartridges or explosive-charged construction devices, explosive rivets, explosive bolts, explosive charges for driving pins or studs be kept in their shipping containers until used.

It is proposed to delete the specific reference to “Class C” explosives to provide consistency within these regulations as the proposed regulations will now reference “high or low explosives” in lieu of “Class A and B explosives”.

### Subsection (c).

Existing subsection (c) prohibits the storage of blasting caps and electric blasting caps in a magazine with other explosive materials. An “Exception” for Make-up and Primer House is included.

The requirement for the storage of blasting caps and electric blasting cap, with the exception for Make-up or Primer House, in subsection (c), is proposed for transfer to new subsection (h)(2) of Section 5251 to consolidate similar requirements into one location.

### Subsection (f).

Existing subsection (f), proposed subsection (e)(1), requires that the magazine contents be protected from flooding.

It is proposed to require that the ground around the magazine be sloped to direct the water away or that drainage be provided. This proposed action is necessary to ensure water is

## Initial Statement of Reasons Explosives Reorganization

not allowed to stand or flood the magazine, which could effect the detonation characteristics of the explosive materials stored in the magazine. This provision is also contained in existing Section 1562(a)(2) of the CSO that is proposed for transfer to proposed subsection (e)(1).

### Subsection (g).

Existing subsection (g) requires that the keys or combinations to the magazine locks be kept in a safe place and only authorized persons be permitted to unlock or remove supplies from the magazine.

This subsection is proposed for transfer to proposed new subsection (j) of Section 5251 to consolidate similar requirements into one location.

### Subsection (h).

Existing subsection (h) requires that the magazine be closed and locked at all times except when opened for use by authorized persons.

This subsection is proposed for transfer to proposed new subsection (j) of Section 5251 to consolidate similar requirements into one location.

### Subsection (j).

Existing subsection (j), proposed subsection (g), states that magazines shall be located at least 5 feet from high-voltage electrical lines and that care should be taken that they be placed in a manner that should a line break, it would not fall within this distance except for underground service. It also references Title 24 that contains building standards and Title 8, Section 5251.

It is proposed to revise subsection (g) to specify that magazines be located at least 25 feet from low-voltage electrical lines and 100 feet from high-voltage electrical lines. This proposal is necessary as it is industry practice to maintain the 25 foot distance from low-voltage electrical lines and the 100 foot distance from overhead high-voltage electrical lines and currently the GISO does not contain these requirements. The proposed revisions to this subsection are proposed for transfer from existing Section 1561(k) of the CSO, existing Section 7210(j) of the MSO, and existing Section 8514(j) of the TSO.

It is proposed to revise Section 5251 to delete the references to Title 24 and Title 8, Section 5251 as these references are obsolete references and no longer applicable. The reference to building standards are proposed for deletion as these regulations are proposed to apply to all industries, construction, mining, tunneling, as well as general industry, making a blanket application of a building standards inappropriate in many cases. Where a fire safety issue is present, the local fire agencies and/or the State Fire Marshal having the authority will require the necessary provisions to be accomplished. Therefore, the reference to Title 24 and the corresponding reference to Title 8 are unnecessary.

Initial Statement of Reasons  
Explosives Reorganization

New Subsection (h).

New subsection (h) states the quantity and storage restrictions for explosive materials.

This proposal is necessary to reflect the proposed reorganization of the explosive safety orders as the provisions of subsections (h)(1) and (h)(2) already exist and are proposed for transfer from existing Section 1561(b) of the CSO and from a portion of existing Section 5251(c).

New subsection (h)(3) requires that no more than 50 pounds of high explosives shall be stored in an indoor magazine.

This proposal is necessary to establish explosive materials quantity and storage restrictions at least as effective as those required by Federal OSHA and the Bureau of Alcohol, Tobacco and Firearms (ATF) as stated in CFR, Title 27, Sections 55.208(b)(1), 55.210(b)(1), and 55.211(b)(1) of the ATF regulations.

New Subsection (i).

New subsection (i) states that Type 3 magazines shall not be used for storage of more than 110 pounds of explosive materials.

Proposed subsection (i) is necessary to ensure that a Type 3 magazine is never used to store more than 110 pounds of explosive materials to be consistent with current industry practice to store two 25-kilogram boxes. The provisions are also contained in existing Section 1561(c) of the CSO that are proposed for transfer to proposed new subsection (i).

New Subsection (j)

New subsection (j) requires that magazines be kept locked, except when contents are being removed and that keys be kept in a safe place. Only authorized persons or licensed blasters shall be permitted to unlock or removed contents from a magazine.

Proposed subsection (j) is necessary to ensure magazines are kept closed and locked, permitting only authorized persons to unlock or remove supplies. These requirements are also contained in existing Section 5251(g) and (h) and existing Section 5256(j) that are proposed for transfer to new subsection (j). In addition, these provisions are also contained in existing Section 1561(e) of the CSO that are proposed for transfer to proposed new subsection (j).

New Subsection (k).

New subsection (k) states that fuse caps with attached safety fuses shall not be stored in an explosive magazine, but may be stored in a magazine with other detonators.

Proposed subsection (k) is necessary to prohibit fuse caps with attached safety fuses

## Initial Statement of Reasons Explosives Reorganization

(capped fuses) to be accidentally stored with other explosives. Capped fuses are detonators and are not safety fuses anymore and should be treated and stored as detonators. These provisions are also contained in existing Section 1561(f) of the CSO that are proposed for transfer to proposed new subsection (k).

### New Subsection (ℓ).

New subsection (ℓ) requires vehicular storage facilities for Types 2, 4, and 5 magazines have wheels removed or be immobilized by kingpin locking devices.

Proposed subsection (ℓ) is necessary to ensure vehicular storage facilities (trailers) are disabled sufficiently to ensure that positive action to remobilize the equipment is necessary before the equipment can be moved. This requirement is necessary to prevent accidental movement or theft of a trailer loaded with explosive materials. The provisions are also contained in existing Section 1561(ℓ) of the CSO that are proposed for transfer to proposed new subsection (ℓ).

### New Subsection (m).

New subsection (m) states that explosive materials shall not be left unattended in Type 3 magazines and that explosive materials shall be removed to a Type 1 or 2 magazine for storage.

Proposed subsection (m) is necessary to prevent unauthorized access or theft of explosive materials. Type 3 magazines are specially constructed portable magazines having a maximum capacity of 110 pounds, and can be carried easily. The provisions are also contained in existing Section 1561(m) of the CSO that are proposed for transfer to proposed new subsection (m).

### New Subsection (n).

New subsection (n) requires maintenance of an inventory of explosive materials stored in magazines with a transfer/removal log, with the exception of Type 3 magazines.

Proposed subsection (n) is necessary to ensure a materials inventory is maintained. This requirement is necessary to determine when the explosive materials were removed, by whom, and the quantity removed. The provisions are also contained in existing Section 1565(f) of the CSO that are proposed for transfer to proposed new subsection (n).

### New Subsection (o).

New subsection (o) ensures storage magazines are located not less than 300 feet from the entrance of an active tunnel or mine.

Proposed subsection (o) is necessary to ensure that should an unintended incident occur which would cause an explosion within a magazine, the resultant overpressure would not



Initial Statement of Reasons  
Explosives Reorganization

cause damage to the portal or access to a tunnel or mine. Also, the distance is such that the blast effect would not extend into the mine or tunnel opening, adversely affecting those employees who are inside the tunnel or mine. The provisions are also contained in existing Section 8514(n) of the TSO that are proposed for transfer to proposed new subsection (o).

New Subsection (p).

New subsection (p) requires posted signs on the premises where magazines are located with specific wording and size of letters, and located within 100 feet of the magazine and so placed that a bullet through the sign would not strike the magazine.

Proposed subsection (p) is necessary to warn employees of explosive materials nearby and to address provisions that are not currently contained in the GISO. These provisions are also contained in existing Section 1562(f) of the CSO that are proposed for transfer to proposed new subsection (p). It is proposed to include additional language specifying the width of letters that states "with a ½ inch stroke" immediately following the phrase "3 inches high". This proposal is necessary to provide letters clearly legible to warn employees to keep off of magazines containing explosive materials.

New Subsection (q).

New subsection (q) requires metal magazines be equipped with electrical bonding connections between all conductive portions so the entire structure is at the same electrical potential. Conductive portions of non-metal magazines shall be grounded.

Proposed subsection (q) is necessary to address bonding connections for metal buildings, provisions that are not currently contained in the GISO. These provisions are also contained in existing Section 8517(i) of the TSO that are proposed to delete the phrase "in a Bichel Gauge" and to include the phrase "for 'toxic gas test'" as the "toxic gas test" method of the Mine Safety and Health Administration (MSHA) is the current practice in determining fume classes; proposed for transfer to proposed new subsection (q).

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5251.)**

Section 5252. Quantity and Distances Table for the Storage of Explosives.

Section (a).

Existing subsection (a) directs the user of explosives or blasting caps to Table EX-1 for the required distances that these materials are to be stored from inhabited buildings or other magazines.

Revisions are proposed to subsection (a) to substitute the term "explosive materials" for "explosives" and to repeal the reference to "blasting caps." This proposal is necessary to

## Initial Statement of Reasons Explosives Reorganization

be consistent with language commonly used by industry and to recognize the reference to blasting caps is unnecessary as blasting caps are a form of explosive materials.

### Subsection (d).

Existing subsection (d) states that for quantity and distance purposes, detonating cord up to 60 grains per foot shall be calculated as equivalent to 9 pounds of Class A explosives per 1,000 feet. Heavier detonating cord shall be rated proportionately.

The proposed substitution of the term “Class A explosives” with the phrase “high explosives” is necessary for consistency within these regulations as the proposed regulations will now reference “high and low explosives” in lieu of “Class A and B explosives.”

### Subsection (e).

Existing subsection (e) requires when two or more storage magazines are located on the same property, each magazine must comply with the minimum distances specified from inhabited buildings, highways, and railways. Included in this regulation are references to Title 24 and Title 8, Section 5252.

It is proposed to replace the word “ground” with the correct word “group”, as the word “ground” was inadvertently included in the text. This proposal is necessary to make an editorial correction.

In addition, it is proposed to delete the references to Title 24 and Title 8, Section 5252 as these references are obsolete references and no longer applicable.

### Table EX-1.

Table EX-1, American Table of Distances for Storage of Explosives, As Revised and Approved by the Institute of Makers of Explosives, gives the minimum distance from specific topographic features that listed quantities of explosives may be stored. This table was last revised and published by the Institute of Makers of Explosives on November 8, 1971 and is currently located in the CSO, Appendix B, Plate B-14.

It is proposed to replace the existing American Table of Distances for Storage of Explosives, published November 8, 1971 with the accompanying “NOTE”, with the latest published table. The newer table was published in June 1991 and is proposed for transfer from the CSO, Appendix B, Plate B-14. This proposed revision is necessary to provide the employer/licensed blaster with the current distances for storage of explosives, and to make California’s regulations consistent with the lead federal agency for explosive materials storage, the Bureau of Alcohol, Tobacco and Firearms (ATF).

### Relocated Table EX-2.

## Initial Statement of Reasons Explosives Reorganization

Proposed relocated Table EX-2, Table of Separation Distances of Ammonium Nitrate and Blasting Agents From Explosives or Blasting Agents, contains a listing of donor weights and the distances the minimum open air distances ammonium nitrate and blasting agents are to be separated from the donor material. Additionally, there is a minimum thickness for artificial barricade, in inches, that may be used. Also, there are explanatory “NOTES”.

It is proposed to transfer TABLE EX-2, Table of Separation Distances of Ammonium Nitrate and Ammonium Nitrate-Based Blasting Agents From Explosives or Blasting Agents and the accompanying “NOTE”, with the exception of subsections (3), (b), (c), and (d), from Section 5253 and the similar table entitled Table of Separation Distances of Ammonium Nitrate and Blasting Agents from Explosives or Blasting Agents from Plate B-14, Table 2 of the CSO to follow Table EX-1 in Section 5252.

It is proposed to utilize the existing title of Plate B-14, Table 2 of the CSO, with the exception of the phrase “Ammonium Nitrate-Based”, as the term “Ammonium Nitrate-Based” is duplicative of the term “Blasting Agents” and therefore, is unnecessary.

The existing Table EX-2, originally located in existing Section 5253, utilizes the term “Receptor” in the subheading of Table EX-2. This term is an inaccurate term that should be instead the term “Acceptor”, as the word “Acceptor” is noted in the “NOTES” following Table EX-2 and is therefore, the appropriate term. The correct term “Acceptor” is proposed to be included in this relocated table in Section 5252 following Table EX-1.

Paragraphs (3) and (3)(b), (3)(c), and (3)(d) of the NOTE to existing TABLE EX-2 in Section 5253 are proposed for repeal to delete unnecessary language as existing Section 5253(b), (c), and (d) already contains this language.

This proposal is necessary to relocate this table to a more appropriate location within Section 5252 of the GISO by placing the two distance tables into one location in the GISO.

### Relocated Table EX-3.

It is proposed to transfer PLATE B-14a, Appendix B of the CSO with revisions to follow Table EX-2 in Section 5252. Table EX-3, entitled “Types of Storage Facilities”, is proposed to delineate what classification of explosive materials may be stored in what type of magazine and provides a comparison of old and new explosive materials classifications for the convenience of the user.

Also, a footnote is also proposed for transfer from PLATE B-14a, Appendix B of the CSO to immediately follow proposed relocated Table EX-3 that indicates that a Type 4 storage facility meets the necessary requirements for the storage of blasting caps which do not mass detonate, provided the blasting caps are properly packaged and readily identifiable as 1.4b detonators of either the electric or non-electric type. This proposed

## Initial Statement of Reasons Explosives Reorganization

footnote permits the employer/licensed blaster to store 1.4b detonators in a Type 4 magazine.

Proposed Table EX-3 is necessary to delineate to the employer/licensed blaster what classifications of explosive materials may be stored in the different “Types” of magazines. Also, the proposed footnote is necessary to clearly indicate that detonators do not mass detonate, provided they are properly packaged and readily identifiable as 1.4b detonators, either electric or non-electric type, may be stored in a Type 4 magazine.

### New Section 5252.1. Quantity and Distance Table for Storage of Explosives—Low Explosives Distances in Feet When Storage is Unbarricaded.

New Section 5212.1 consists of an explanation of low explosives and a table of unbarricaded distances from topographical features that specified quantities of low explosives to be stored. The regulation further states that the distance is not to be reduced because of the presence of barricades or earth cover.

The provisions of new Section 5252.1 are currently contained in Section 7212 of the MSO and Section 8516 of the TSO and are proposed for transfer into the GISO. This proposal is necessary to ensure the storage requirements of low explosives are contained in the GISO. A revision is proposed to revise the old term “Class B”, as originally specified in Section 7212 of the MSO and Section 8516 of the TSO, to the new term “Low Explosives”, as the term “Class B” is an obsolete classification. In addition, the DOD and ATF regulations are required to comply with this table for many years.

### Section 5253. Quantity and Distance Tables for Storage of Ammonium Nitrate and Blasting Agents.

Existing Section 5253 and the NOTE to Section 5253 contain instructions and clarification for the use of the ammonium nitrate and blasting agent tables. There also is a table with the required separation distances for specified quantities of ammonium nitrate and ammonium nitrate based blasting agents from explosives or blasting agents.

#### Subsection (a).

Existing subsection (a) states that the quantity of ammonium nitrate or ammonium Nitrate based blasting agents that may be stored in any magazine shall conform to Table EX-2, Table of Separation Distances, which sets forth the minimum separation distances for ammonium nitrate and blasting agents from stores of high explosives or blasting agents. These distances apply to the separation of stores only.

It is proposed to revise subsection (a) to lower case the letter “N” in the word “Nitrate” and to include the references to “Section 5252” following the titles of Table EX-2 and Table EX-1. This proposal is necessary to editorially correct the word “nitrate” and to clarify the references to Table EX-2 and Table EX-1 as referenced in the regulation.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (b).

Existing subsection (b) requires that when ammonium nitrate and/or blasting agent are not barricaded, the distances shown in the TABLE are to be multiplied by six. An explanation is given for this multiplier. It further states that if the storage is bullet resistant, the distances listed in TABLE EX-1 are sufficient. The regulation then references those sections containing the construction requirements for magazines.

It is proposed to revise subsection (b) to specify that the table referenced in subsection (b) is Table EX-2 in Section 5252 and to specify that Section 5252 contains Table EX-1 for clarity, and to substitute the reference to new Section 5253.1 in lieu of Sections 5254 and 5255. The proposed substitution of the reference to new Section 5253.1 in lieu of the references to Sections 5254 and 5255 is necessary as these two sections address construction requirements and all the magazine construction requirements are proposed for consolidation into new Section 5253.1.

Subsection (d).

Existing subsection (d) states that the actual amount of ammonium nitrate available when determining distances to be maintained from inhabited buildings may be reduced by 1/2 of its actual weight because of its lower blast effect.

Immediately following existing subsection (d) is a “NOTE” discussing the insensitivity of the ammonium nitrate and its use as a fertilizer, the materials used to sensitize ammonium nitrate to give it the characteristics of dynamite, that when mixed, it is to be stored as explosives, and that burning ammonium nitrate produces oxides of nitrogen, which is dangerous to breathe. Included in this regulation are references to Title 24, Title 8, Section 5253.

It is proposed to revise existing subsection (d) to substitute the word “shall” in place of the word “may”. This proposal clarifies the current industry practice being used since this quantity and distance table was established.

It is proposed to revise Section 5253 to delete the references to Title 24 and Title 8, Section 5253 as these references are obsolete references and no longer applicable. The reference to building standards are proposed for deletion as these regulations are proposed to apply to all industries, construction, mining, tunneling, as well as general industry, making a blanket application of a building standard inappropriate in many cases. Where a fire safety issue is present, the local fire agencies and/or the State Fire Marshal having the authority will require the necessary provisions to be accomplished. Therefore, the reference to Title 24 and the corresponding reference to Title 8 are unnecessary.

TABLE EX-2.

Initial Statement of Reasons  
Explosives Reorganization

TABLE EX-2, Table of Separation Distances of Ammonium Nitrate and Ammonium Nitrate-Based Blasting Agents From Explosives or Blasting Agents, contains a listing of donor weights and the minimum open air distances ammonium nitrate and blasting agents are to be separated from the donor material. Additionally, there is a minimum thickness for artificial barricade, in inches, that may be used. Also, there are explanatory “NOTES”.

TABLE EX-2 is proposed for transfer to follow Table EX-1 in Section 5252. The transfer is proposed to place both the storage and distance tables into one consolidated location in Section 5252. The term “Receptor” in the subheading of existing Table EX-2 is an inaccurate term that should be instead the term “Acceptor”, as the word “Acceptor” is noted in the “NOTES” following Table EX-2. The correct term “Acceptor” is proposed to be included when this table is proposed for transfer to Section 5252 following Table EX-1. It is proposed to repeal NOTE (3)(b)-(d) as this information is already contained in existing Section 5253(b), (c), and (d) and therefore, is unnecessary.

New Section 5253.1.

A new Section 5253.1 is proposed to address the construction and use of the accepted types of explosive storage magazines, Type 1 through Type 5.

The regulations in Section 5253.1 are proposed for transfer from Section 1562 of the CSO and the provisions are also contained in existing Section 7213 of the MSO and existing Section 8517 of the TSO, with the exception of proposed subsections (b)(1)(D), (b)(1)(E), (c)(2), and (f). The provisions are also proposed for transfer from existing Section 5254(a) – (i). This proposal is necessary to ensure retention of the existing CSO, MSO, and TSO regulations within the GISO.

It is proposed to adopt new subsections (b)(1)(D), (b)(1)(E), and (c)(2), and to incorporate proposed subsection (f).

Proposed new subsection (b)(1)(D) requires Type 2 magazines to be located in conformance with Table EX-1, Distances for the Storage of Explosives, but still permit them to be located in warehouses and sales establishments provided specific exit distances and quantities have been met. The location of the magazine shall comply with the listed quantity and distance table and have an entrance to the building at grade level and ensure it is within 10 feet of that entrance and at grade level.

This proposal is necessary to be at least as effective as the federal requirement contained in 29CFR 1910.109(c)(1)(vii) with respect to the placement and use of Type 2 magazines, including when used in warehouses and sales establishments.

Proposed new subsection (b)(1)(E) requires indoor magazines to be painted a specific color with designated language meeting certain size requirements. This regulation also states as an “EXCEPTION” that when size of the indoor magazine does not permit, letterings shall be as large as possible.

Initial Statement of Reasons  
Explosives Reorganization

This proposal is necessary to be at least as effective as the federal requirement contained in 29CFR 1910.109(c)(4)(iv) with respect to the required markings, size of letters, and language on indoor magazines. With regards to the ½ inch stroke requirement, this proposal is necessary to provide letters clearly legible to warn employees of explosives fire hazards.

Proposed new subsection (c)(2) requires that when a Type 3 magazine is used for temporary storage on site for blasting operations, the magazine shall be located away from inhabited buildings and at least 150 feet from other magazines and work in progress.

This proposal is necessary to be at least as effective as the federal requirement contained in 29CFR 1910.109(c)(1)(viii) with respect to requiring Type 3 storage magazines to be at least 150 feet from other magazines and work in progress.

Proposed subsection (f) requires that magazines be ventilated and that the ventilation openings be screened and protected to maintain the bullet resistance of the magazine. In addition, a NOTE is provided referencing a publication from the Institute of Makers of Explosive.

Proposed subsection (f) and the NOTE are proposed for transfer from existing Section 5254(g) and the NOTE, existing Section 7213(g) and the NOTE of the MSO, and existing Section 8517(e) and the NOTE. This proposal is necessary to relocate an existing regulation and information into a more appropriate location as the result of the proposed reorganization of the explosive safety orders and to ensure retention of the existing MSO and TSO regulations within the GISO, respectively.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5253.1.)**

Section 5254. First-Class Magazines.

The title to this Section presently addresses first-class magazines.

A revision is proposed to change the title to “Magazine Heating.” The proposed revision will inform the reader that the section is now specific to provisions for providing heat to storage magazines.

Existing Section 5254(a) through (i) contains the construction requirements and the prohibitions of certain types of equipment within first-class magazines.

Because proposed new Section 5253.1 contains the construction requirements for all types/classes of magazines, the construction requirements currently contained in Section 5254(a) through (i) are, therefore, unnecessary and are proposed for repeal.

Initial Statement of Reasons  
Explosives Reorganization

As a result of this proposal, existing subsections (j)(1)-(7), the requirements for magazine heating equipment remain, and are proposed to be renumbered as subsections (a)(1)-(7). For this reason, it is proposed that the title to this section be revised from "First-Class Magazines" to "Magazine Heating" to clearly indicate the subject of the regulation. It is proposed to revise subsection (a)(5) to delete the reference to the word "California" preceding the phrase "Electrical Safety Orders" as the reference to California is unnecessary. In addition, it is proposed to delete the reference to Title 24 and Title 8, Section 5254 from existing Section 5254(j)(7), proposed Section 5254(a)(7), as this reference is an obsolete reference and no longer applicable.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5254.)**

Section 5255. Second-Class Magazines.

Existing Section 5255 delineates the methods and materials to be used in the construction of second-class magazines.

The regulations in Section 5255 are proposed for repeal as the requirements are contained in proposed new Section 5253.1(b) and (c), Type 3 Magazines, and the provisions of 40 CFR 55, Subpart K, which are actively enforced by the Bureau of Alcohol, Tobacco and Firearms (ATF). Also, the provisions of existing Section 1562 of the CSO have been enforced since July 26, 1997. In addition, these provisions are currently contained in existing Section 7214 of the MSO and existing Section 8518 of the TSO that are proposed for repeal. For this reason, it is necessary to repeal Section 5255 in its entirety to consolidate regulations into one location and avoid duplication.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5255.)**

Section 5256. Storage Within First-Class Magazines.

The requirements contained in existing Section 5256, in many circumstances, can be applied to all storage magazines. Therefore, it is proposed to delete the specific reference in the title that reads "First-Class" to read "Storage Within Magazines".

Existing Section 5256 contains specific requirements relating to cleanliness, smoking, electrical wiring, portable lights, corresponding grades and brands of explosives, order of removal of explosives (oldest first), containers, packing and unpacking containers, repairs, requirements that doors be kept locked, and other general requirements.

Subsection (a).

Existing subsection (a) requires that magazines be kept clean and free from rubbish and not be used as storerooms and transfers conveyors.



## Initial Statement of Reasons Explosives Reorganization

Subsection (a) is proposed for revision to substitute the term "explosive materials" for the term "explosives" to be consistent with industry language.

In addition, it is proposed to include new language that states "Sweepings from floors of magazines shall be properly disposed of. Magazines floors stained by leakage from explosive materials shall be cleaned according to instructions by the explosives manufacturer." The provisions of this subsection are taken from the ATF regulations cited in Title 27, CFR, Part 55, Commerce in Explosives, Section 55.215, Housekeeping. This proposal is necessary to eliminate the accidental explosion of deteriorated explosive debris in the sweepings and eliminate stains from leakage of explosive materials.

### Subsection (b).

Existing subsection (b) prohibits ignition sources within 50 feet of magazines. It also prohibits storing combustible materials or permitting grass or brush within 50 feet of the magazine.

The provision of subsection (b) requiring that brush, grass and combustible materials be kept cleared away from surface magazines for a distance of 50 feet is proposed for repeal as it duplicates the requirements of Section 5251(e) and therefore, is unnecessary.

### Subsection (d).

Existing subsection (d) permits only electric safety flashlights or lanterns within a magazine.

It is proposed to substitute the term "permissible" in place of the phrase "electric safety" in subsection (d). The terms "permissible flashlight" and "permissible lanterns" are more readily understood within the industry to mean a flashlight/lantern has been designed and constructed to ensure that when an electric circuit has been made, the resulting electric arc is safely contained within the case or insulation of the device. In this manner, there is no likelihood of igniting the explosive within the magazine.

### Subsections (e), (f), (h), and (i).

Existing subsection (e) contains requirements for the storage of grades and brands of explosives. Existing subsection (f) requires that when explosives are removed from a magazine, the oldest explosive of that kind in the magazine be taken and used first. Existing subsection (h) requires that explosives be removed when magazines need repair. Existing subsection (i) requires that explosives removed from a magazine under repair be properly guarded and protected until repairs are completed and returned to the magazine.

Editorial revisions are proposed to subsections (e), (f), (h), and (i) to substitute the term "explosive materials" in place of the word "explosives". These editorial revisions are necessary to reflect the term commonly used within the industry. In addition, in subsection (e), the letter "c" in the word "corresponding" inadvertently contains a lower

## Initial Statement of Reasons Explosives Reorganization

case letter “c”. This letter should instead be an upper case letter “C”. This proposal is necessary to correct a grammatical error.

### Subsection (g).

Existing subsection (g) prohibits packing or unpacking bulk containers of explosive materials inside or within 50 feet of a magazine or within proximity of other explosive materials. Also, it requires that opened containers of explosives are to be securely closed before returning the containers to a magazine.

A revision is proposed in subsection (g) to indicate that at manufacturing facilities, containers can be unpacked at the processing/manufacturing site to continue the operation. This proposal is necessary to continue the process and manufacturing operations.

### Subsection (j).

Existing subsection (j) requires that magazine doors are to be kept locked except when explosives are being removed or replaced, or during inspections.

Subsection (j) is proposed for transfer to new Section 5251(j) that is proposed to contain the same provisions. This proposal is necessary to relocate this provision to a more appropriate location in Section 5251(j) of the GISO.

### Subsection (k).

Existing subsection (k), proposed new subsection (j), requires that magazines used for the storage of explosives are to be under the supervision of a qualified person. Included in this regulation are references to Title 24, Title 8, Section 5256(c).

A revision is proposed to proposed subsection (j) to substitute the term “explosive materials” in place of the word “explosives” to reflect the term commonly used within the industry. This editorial revision is necessary to reflect the term commonly used within the industry. In addition, it is proposed to substitute the term "qualified" for the term "competent" person. This proposal is necessary to be consistent with the rest of these orders and to be “at least as effective as” the federal counterpart regulations. A competent person has the authority to take action to address a safety hazard/concern if noted/observed.

In addition, it is proposed to delete the references to Title 24 and Title 8, Section 5256(c) as these references are obsolete references and no longer applicable.

### New Subsection (k).

Proposed new subsection (k) requires the employer/licensed blaster to take precautions to

Initial Statement of Reasons  
Explosives Reorganization

ensure that explosive materials are not stored against interior walls.

This proposal is necessary to ensure that the explosive materials shall not be piled or stored against interior walls to prevent interfering with the ventilation system and to be consistent with the requirements of Section 55.214(a) of the ATF – Explosives Law and Regulations. The Bureau of Alcohol, Tobacco and Firearms (ATF) is the lead agency for the storage of explosive materials. Further, this practice is widely used in the explosives industry.

New Subsection (ℓ).

Proposed new subsection (ℓ) requires that if buffer material is used to separate the explosive materials from the walls, it shall be positioned so as not to interfere with the ventilation provisions of the side and walls.

This proposed requirement is necessary to ensure that the magazine ventilation remains effective and also to be consistent with the requirements of Section 55.214(a) of the ATF – Explosives Law and Regulations. The Bureau of Alcohol, Tobacco and Firearms (ATF) is the lead agency for explosive materials storage. Further, this practice is widely used in the explosives industry.

New Subsection (m).

The provisions of proposed new subsection (m) requires that ammonium nitrate fuel oil blasting agent to be physically separated from other explosives stored in the magazine and in a manner that will prevent the oil from contaminating the other explosives. These provisions are proposed for transfer from existing Section 7210(k) of the MSO and existing Section 8514(k) of the TSO.

This proposed requirement is necessary to prevent mixing as the explosives could become sensitive and an incident could occur.

New Subsection (n).

Proposed new subsection (n) requires the magazine interiors to be free of cracks or crevices and that all nail, screws, bolts, and nuts are countersunk. Exposed metal or materials capable of producing sparks are to be covered. This provision is proposed for transfer from existing Section 7213(h) of the MSO and existing Section 8517(f) of the TSO.

This proposed requirement is necessary to ensure there can be no areas where explosive dust can accumulate and there are no spark producing extrusions.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5256.)**

Initial Statement of Reasons  
Explosives Reorganization

Section 5257. Makeup or Primer House for Blasting Operations.

It is proposed to revise the title to include the term “Underground” before the phrase “Blasting Operations” to clearly indicate that Section 5257 applies specifically to underground blasting operations only.

New Subsection (a).

New subsection (a) is proposed that requires when 30 or more primers are required for a single shot, the primers be made up in advance in a makeup or primer house.

This proposal is necessary to eliminate or greatly reduce a potential hazard to personnel from an incident by making up the primers in a controlled and clean environment.

Subsection (a).

Existing subsection (a), proposed subsection (b), delineates when a primer house is required and to what type of magazine it is to comply with.

It is proposed to substitute the terms "Type 1 or Type 2" magazines for first-class magazines. The term "first class" is proposed to be replaced by the term "Type 1" magazines to be consistent with revisions proposed for Section 5253 and other sections within these orders. This proposal will also make California's designation consistent with the Bureau of Alcohol, Tobacco and Firearms, the lead agency regarding the storage of explosive materials. Also, for consistency, it is proposed to include “Type 2” magazines, as a Type 2 magazine can be used to store high explosive and be unattended, as defined in the these regulations.

Subsection (a)(1).

Existing subsection (a)(1), proposed subsection (b)(1), permits electricity for lights if the electrical wiring is at least 5 feet from explosives and complies with Class II, Division I, Hazardous Locations, California Electrical Safety Orders.

It is proposed to revise subsection (b)(1) to delete the reference to the word “California” preceding the phrase “Electrical Safety Orders” as the reference to California is unnecessary.

Subsection (a)(2).

Existing subsection (a)(2), proposed subsection (b)(2), prohibits more than 100 pounds of explosives, other than primers, to be stored in a primer/makeup house.

A revision is proposed to proposed subsection (b)(2) to substitute “110 pounds” for the “100 pounds” that may be stored in a primer or makeup house. This proposal is necessary because explosive materials used in blasting operations are currently shipped in

Initial Statement of Reasons  
Explosives Reorganization

containers containing 25 kilograms, or approximately 55 pounds, of material. This proposal is necessary to be consistent with international commerce. The containers used to weigh 50 pounds and it was practice to limit storage to two cases. Therefore, in order to be able to continue to store up to two cases of explosive materials in a primer or makeup house, the weight limit is proposed to be raised to 110 pounds.

Subsection (a)(4).

Existing subsection (a)(4), proposed subsection (b)(4), is proposed for revision to substitute the existing reference to Section 5254(j) to read Section 5254(a).

This proposed revision is necessary to reflect the proposed renumbering of the subsections within Section 5254.

Subsection (b).

Existing subsection (b) is not enforceable as it only clarifies that primers may be made up in a separate building or area provided explosive materials are stored in proper magazines.

Therefore, a revision is proposed to make existing subsection (b) an informative “NOTE” to Section 5257 to be relocated to follow proposed new subsection (d) as the more appropriate location for this “NOTE”.

New Subsection (c).

New subsection (c) is proposed to require the employer to locate a makeup or primer house at least 100 feet from any magazine or inhabited building.

This proposal is necessary to ensure that makeup or primer houses are be located at least 100 feet from magazines or inhabited building to prevent a secondary explosion or fire involving an adjacent structure should an incident occur. The provisions of this requirement are currently located in existing subsection (c) and are proposed for transfer to clearly indicate primers are to be made up either in a makeup house.

Subsection (c).

Existing subsection (c), proposed new subsection (d), states that primers made up in locations other than a make-up house must be done at least 100 feet from a first-class magazine and at a safe distance from other workers not involved with the blasting operations. Included in this regulation are references Title 24, Title 8, Section 5257(a) and (b).

It is proposed to editorially revise proposed subsection (d) by deleting the “hyphen” between the words “make” and “up” to be editorially consistent with how the word “makeup” is identified within the regulation, by substituting the term "shall" in place of

Initial Statement of Reasons  
Explosives Reorganization

the word "must" to provide terminology that is consistent in Title 8. It is further proposed to indicate that primers are to be made up at the blast site if a makeup or primer house is not used; thereby, transferring the provision allowing primers to be made up at a location at least 100 feet from the first-class storage magazine if they are not made up in a primer house to proposed subsection (c). This proposal is necessary to ensure that primers are made up only where there is controlled access. Only the licensed blaster and loading crew are permitted at the blasting site during loading operations.

In addition, it is proposed to delete the references to Title 24 and Title 8, Section 5257(a) and (b) as these references are obsolete references and no longer applicable.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5257.)**

Section 5258. Storage of Explosives Underground.

It is proposed to revise the title of Section 5258 to substitute the term “Explosive Materials” in place of the word “Explosives” to be consistent with industry terminology.

Subsection (a).

Existing subsection (a) [provision is contained in existing Section 7217(a) of the MSO] requires that explosives stored underground be located where if an explosion or burn should occur, it will not shut off the employee escape route.

The proposed substitution of the terms “explosives” with “explosive materials”; “explode” with “detonate”; “workmen” with “employees”; and “shut off” with “obstructed” in existing subsection (a) are editorial revisions which updates the regulatory text to current terminology familiar with the affected industry and consistent with other proposed revisions within the explosives regulations.

Subsection (b).

Existing subsection (b) [provision is contained in existing Section 7217(b) of the MSO] requires that magazines be located a minimum of 200 feet from the entrance to active underground work areas and specific distances from magazines and haulage ways and requires any timbers within 25 feet of a magazine be made fire retardant.

Revisions are proposed to subsection (b) to delete the reference to "First-class" magazine as this reference is obsolete in magazine classifications. In addition, it is proposed to substitute the term "retardant" with the term “resistant” to state that “timbers are to be fire resistant” to provide terms familiar to the affected parties.

Subsection (c).

## Initial Statement of Reasons Explosives Reorganization

Existing subsection (c) [provision is contained in existing Section 7217(c) of the MSO] prohibits the storage of more than a three-day supply of explosives in an underground magazine unless permitted by the Division.

Subsection (c) is proposed for revision to delete the phrase "...unless accepted by the Division, not more than a 3-day supply..." as there are no defining terms or factors as to what would be acceptable to the Division. It is proposed to substitute the term "explosives" with "explosive materials" to be consistent with industry terminology. The proposed addition of the phrase "work area during tunneling and construction operations" and the repeal of the phrase "not more than a 3-day supply" are necessary to define what activities are prohibited from storing explosives underground.

The major differences between a mine and tunnel construction activity is that normally there are several access/egress ways in a mine environment, thereby, permitting the placement of an explosive materials storage magazine in a location which does not present the hazard of closing off the exit way should an unwanted explosion or fire occur in or at the magazine. Underground construction, i.e., tunnel projects, are normally limited to a single access/egress way.

It is common practice in the mining industry, an industry that uses explosive materials underground, to store more than a one-day supply of explosive materials underground. Therefore, this proposal is necessary to prohibit the storage of explosive materials in the work areas of tunneling and construction operations as there normally is only one access way into the area. An unwanted explosion or incident could result in closure of the only route to a safe refuge.

The proposed revisions are consistent with existing Section 8521 of the TSO that is proposed for transfer into this subsection.

### Subsection (d).

Existing subsection (d) [provision is contained in existing Section 7217(d) of the MSO] addresses the installation of wiring for equipment used for drying wet explosives.

In addition to substituting the term "explosives" with "explosive materials", clarifying language is proposed to indicate the type of wiring being addressed by including the word "Electrical" before the word "wiring". This proposal provides language that is consistent with industry terminology and clarifies that it is electrical wiring that is referenced.

### Subsection (e).

Existing subsection (e) [provision is contained in existing Section 7217(e) of the MSO] requires that first-class storage magazines be conspicuously marked with the word "EXPLOSIVES" in specified color and size of letters.

A revision is proposed to subsection (e) to delete the specific reference to "first-class"

## Initial Statement of Reasons Explosives Reorganization

magazine. The potential of any explosive material to cause extensive damage, injury, or death is always present and therefore, there are certain measures to be taken to prevent an unwanted incident common for all magazines.

### Subsection (f).

Existing subsection (f) [provision is contained in existing Section 7217(f) of the MSO] prohibits the placing of combustible rubbish within 100 feet of any underground storage magazine. Included in this regulation are references to Title 24, Title 8, Section 5258(b) and (d).

It is proposed to delete the references to Title 24 and Title 8, Section 5258(b) and (d) as these references are obsolete references and no longer applicable.

### New Subsection (g).

Proposed new subsection (g) requires that detonator storage magazines to be constructed as explosive storage magazines and to be located at least 50 feet from other magazines.

This proposal is proposed for transfer from existing Section 7217(g) except the requirement that detonator storage magazine be at least 25 feet from a second-class magazine. This proposed new subsection requires instead that detonator storage magazines be at least 50 feet from other magazines to be consistent with 29CFR 1926.904(f), the federal requirement that permanent underground magazines containing detonators are to be stored 50 feet away from above ground magazines. Therefore, this proposal is necessary to be consistent with 29CFR 1926.904(f) federal requirements for explosive materials magazines and storage.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5258.)**

## **Article 115. Transportation of Explosives.**

An editorial revision is proposed to the title of Article 115 to substitute the term “Explosive Materials” in place of the word “Explosives” to be consistent with industry terminology.

### Section 5262. General.

#### Subsection (a).

Existing subsection (a) states that this Article applies to vehicles whose operations are not under the jurisdiction of the U.S. Department of Transportation, the California Highway Patrol, or the California Vehicle Code, or the Health and Safety Code on Public Highways.



Initial Statement of Reasons  
Explosives Reorganization

A revision is proposed to subsection (a) to include the word “motorized” before the word “vehicles” to indicate that these regulations apply only to motorized vehicle to clarify that this regulation does not apply to hand or foot powered vehicles.

Subsection (b).

Existing subsection (b) prohibits blasting caps or similar primary explosives initiation devices to be transported upon any vehicle equipped with a radio transmitter or any device which may cause detonation unless these devices have been tested and proved safe for transportation and are so labeled.

The proposed revisions to subsection (b) to substitute the term "electric detonators" in place of the term "blasting cap" is in concert with the proposed revisions to the definitions of explosive materials and detonators. Also, it is proposed to substitute the phrase “on/in” in place of the word “upon” as it is necessary to recognize the explosive materials may be physically transported with the vehicle.

Further, the proposed repeal of the criteria noted to be acceptable for the transporting of electric detonators when a radio transmitter is present is necessary as the advisory committee expressed concerns regarding the continuation of this practice as there is no State Fire Marshal approved laboratory. The advisory committee noted that the State Fire Marshal has no laboratory to approve or disapprove detonating devices for transportation on a vehicle equipped with a radio transmitter. Therefore, the advisory committee recommended that this provision be deleted, along with subsections (b)(1) and (b)(2), as this provision is unenforceable and therefore, unnecessary.

Subsection (c).

Existing subsection (c) prohibits the hauling of blasting caps in any vehicle containing over 5,000 pounds of explosives.

A revision is proposed to substitute an incorporation by reference of the Institute of Makers of Explosives, Safety Library Publication No. 22, Recommendations for the Safe Transportation of Detonators in a Vehicle with Certain Other Explosive Materials, May 1993, pages 1 – 16, for the existing prohibition. The proposal is necessary as shipping methods and accompanying procedures make the use of specific limits obsolete. The proposed incorporation by reference of the Institute of Makers of Explosives, Safety Library Publication No. 22, Recommendations for the Safe Transportation of Detonators in a Vehicle with Certain Other Explosive Materials, May 1993, pages 1- 16, is necessary to ensure that detonators and explosive materials are transported in an accepted and safe method. This document has been developed through the joint efforts of the manufacturers and users of explosive materials.

Section 5263. Surface Transportation.

## Initial Statement of Reasons Explosives Reorganization

The heading of the section number and title of existing Section 5263 is proposed for repeal. It is proposed to incorporate the provisions of existing Section 5263 into proposed Section 5262 as the requirements fall into the "general" category for the transportation of explosive materials.

The proposal to include the provisions of existing Section 5263 into proposed Section 5262, General, is necessary to place similar or related regulations regarding transportation of explosive materials together into the same section. As a result of this proposal, the existing section number and title of existing Section 5263, Surface Transportation, is no longer necessary and therefore, is proposed for repeal.

### Subsection (a).

Existing subsection (a), proposed Section 5262(d), contains requirements for the placarding of vehicles transporting explosives and delineates the colors and wording to be used on the placards. In addition, existing subsection (a) addresses motor vehicles, trailers or other cargo-carrying device containing more than one type of explosive material as well as oxidizing material requiring placarding as required in subsection (a)(1), the aggregate weight of which exceeds 1,000 pounds.

The proposed revisions to existing subsection (a), proposed Section 5262(d), delete specific requirements for the display of placarding at various locations on vehicles, to be replaced by a reference to the requirements of the U.S. Department of Transportation (USDOT), the agency that prescribes types and locations of placarding on vehicles used to transport explosive materials nationwide. An exception is proposed for the transportation of explosive materials in the manufacturing process at the manufacturer's facility to eliminate unnecessary labeling or placarding requirements. Additionally, the table entitled "Commodity" and "Type of Marking or Placard", and subsections (a)(1) and (2) are proposed for repeal as they are no longer necessary as the proposed revisions will require the employer to comply with the placarding requirements of the USDOT.

### Subsection (b).

Existing subsection (b), proposed Section 5262(e), states that if detonators and explosives are carried in the same vehicle, an air space shall be provided between the materials. Additionally, shipping containers or second-class magazines shall be used for taking detonators and explosives from storage magazines to the blasting area.

A revision is proposed to proposed subsection (e) to delete the prohibitions relating to blasting caps and capped fuses as this provision is informational only. Also, it is proposed to transfer the 25-inch air space requirement to Section 5264(c)(1) to a more appropriate location to address underground transportation. In addition, it is proposed to indicate that the "original" shipping containers or "Type 3 magazines (day box)" in lieu of "second-class magazines" shall be used when taking explosives from a storage magazine to ensure the appropriate container is used for transportation and to be consistent with other proposed revisions within the Group 18 regulations. Finally, it is

Initial Statement of Reasons  
Explosives Reorganization

proposed to include the word “materials” to follow the word “explosives” to reflect current industry terminology.

Subsection (c).

Existing subsection (c), proposed Section 5262(f), contains general requirements for the construction and mechanical integrity of the equipment and for vehicles transporting explosives. In addition, this subsection contains seven subsections relating to the inspection of the vehicles prior to carrying explosives.

It is proposed to revise proposed Section 5262(f) to substitute the word "explosives" with the term "explosive materials" wherever the word “explosives” appears in proposed subsection (f) to reflect language presently used by the industry. In addition, it is proposed to delineate the individual elements within proposed subsection (f) by assigning numeric designations. This proposed delineation of the individual subsections within subsection (f) is necessary to clearly indicate the separate requirements contained in subsection (f).

The proposed “EXCEPTION” in proposed subsection (f)(2), eliminates the need for non-sparking covers on spark producing metal on the floors of vehicles transporting blasting agents or oxidizers. This proposal is necessary to allow blasting agents and oxidizers to be transported in bulk by tank or hopper trucks and is consistent with Section 5347(b) of the GISO. This requirement is currently contained in the latter portion of Section 7221(c) of the MSO and is proposed for transfer into the GISO.

It is proposed to replace the term “A motor vehicle” with the word “Vehicles” in proposed subsection (f)(4). This proposal is necessary as not all vehicles are powered by a “motor”. Power to propel or move the vehicle may be derived from unattached auxiliary motor vehicle, hydraulic pump, or pneumatic pump/motor. In addition, it is proposed to allow the employer to inspect the vehicle weekly or prior to use when used less than weekly to transport explosive materials. This proposal is necessary to eliminate the need for the employer to make weekly inspections needlessly if the vehicle has not, or will not, be used to transport explosive materials.

Revisions are proposed to proposed subsection (f)(4), to clarify that the required vehicle inspection is to include, but not be limited to, proposed subsections (f)(4)(A)-(G), as it is not the intent to provide a "limited list" when an employer would consider other items to be equally important.

Existing subsection (c)(1), proposed subsection (f)(4)(A), states that fire extinguishers shall be filled and in working order. It is proposed to revise proposed subsection (f)(4)(A) to include the phrase “that comply with subsection (g)” to follow the term “Fire extinguishers”. This proposal is necessary to provide clarity in the regulation by stating that the fire extinguishers that comply with the provisions of subsection (g) must be filled and in good working order. Proposed subsection (g) identifies the type of fire extinguishers to be used in vehicles transporting explosive materials.

## Initial Statement of Reasons Explosives Reorganization

A new subsection (f)(4)(B)1. is proposed to prohibit the installation of auxiliary lighting systems on truck beds which are powered by the truck's electrical system. This prohibition is necessary to prevent the introduction of a source of ignition. The wiring for a lighting system using the trucks electrical system would have a "hot" lead connected to the lights at all times and, if a break in the wiring insulation were to occur, a spark could result, igniting any explosive materials which were being transported or placed on the truck bed.

Proposed subsection (f)(4)(F), existing subsection (c)(6), requires the tires to be checked for proper inflation and defects.

It is proposed to revise proposed subsection (f)(4)(F) to add the phrase "... which may effect the safe operation of the vehicle." This proposed statement is necessary to clearly indicate that only those defects that are a safety concern need to be addressed.

### Subsection (d).

Existing subsection (d), proposed Section 5262(g), contains requirements that fire extinguishing equipment is to be located within the vehicle used to transport explosives.

Revisions are proposed to proposed subsection (g) to substitute the word "explosives" with the term "explosive materials" to reflect language currently used in the industry. Also, the proposed revisions to proposed subsection (g) concerning increasing the size of fire extinguishers from 2-A:10-B:C to 4-A:20-B:C are necessary to make these provisions consistent with the USDOT and NFPA requirements. In addition, it is proposed to repeal the reference to the Underwriter's Laboratory as this reference is unnecessary. The proposed addition of the word "carried" is necessary to indicate what fire extinguisher the driver is to be trained in how to use.

### Subsection (e).

Existing subsection (e), proposed Section 5262(h), prohibits the transportation of other materials with explosives unless the explosives are protected from mechanical damage or the other materials are secured in place. Also, the regulation permits special service trucks to transport small amounts of explosives when necessary.

It is proposed to revise proposed Section 5262(h) to substitute the word "explosives" with the term "explosive materials" wherever the word "explosives" appears in proposed subsection (h) to reflect language presently used by the industry.

A new subsection (h)(1) is proposed to require that a Type 3 magazine or original shipping container is secured against movement during transport on an open bodied vehicle to ensure the container and explosive materials are not "bounced" or thrown from the vehicle. The impact of the explosive materials from striking the ground could cause a detonation, resulting in serious injury and/or death of persons within area.

## Initial Statement of Reasons Explosives Reorganization

In addition to minor editorial revisions, it is proposed to revise proposed subsection (h)(2) to include language that states “such as, but not limited to, used in such operations as well services, snow avalanche control, seismic work, and explosives research and development” following the term “Special service trucks”. This proposal is necessary to clarify the term “special service trucks” by providing examples. Also, it is proposed to delete the reference to the undefined/vague term “small amounts” to be replaced with the term “one Type 3 magazine (day box)”. This proposal is necessary to clarify the amount of explosives that can be carried in a special service truck. In addition, it is proposed to revise the references to the subsections to reflect the proposed renumbering system.

### Subsection (f).

Existing subsection (f), proposed subsection (i), requires that the motor vehicles or conveyances hauling explosives be driven only by a licensed driver familiar with the explosives regulations of the local, state and federal governments, and prohibits any one except the driver and employees necessary to ensure the safe operation and protection of the vehicle and load to ride on the vehicle.

It is proposed to revise proposed Section 5262(i) to substitute the word "explosives" with the term "explosive materials" wherever the word “explosives” appears in proposed subsection (i) to reflect language presently used by the industry. Also, it is proposed to delete the word “only” before the phrase “be driven by” to remove an unnecessary modifier. In addition, editorial revisions are proposed to eliminate specific gender references.

A revision is proposed to proposed subsection (i) to remove the existing provision that “only the driver and employees necessary for the safe operation and protection of the vehicle and load shall ride on vehicles transporting explosives”. This requirement is unnecessary as a similar provision, a provision that clarifies the intent of the regulation and is clearer to the regulated public, is proposed in proposed subsection (j) that is also proposed for transfer from existing Section 5267(g). This proposal is necessary as it clarifies that only those persons with the knowledge and expertise in handling explosives are to be on the vehicle. In addition, this proposal is necessary to identify this provision as a separate subsection within proposed Section 5252, as proposed subsection (j).

In addition, a revision is proposed to transfer the provisions of existing Section 5263(o) [except for the first provision as it is redundant to the existing language in existing subsection (f), proposed subsection (i)] to proposed subsection (i), with revisions to delete extraneous language. The provisions proposed for transfer pertain to the driver’s responsibilities with regard to the knowledge of, the training of, and the dangers of transporting explosives. This proposal is necessary as it relocates these provisions to a more logical subsection within proposed Section 5262(i) regarding the requirements of the licensed driver transporting explosives.

### New Subsection (j).

## Initial Statement of Reasons Explosives Reorganization

A new subsection (j) is proposed to indicate that the employer permits only the vehicle operator and powder crew to ride the vehicle transporting explosive materials. A similar provision is contained in existing Section 5267(g) and proposed Section 5263(f), with revisions that clarify the intent of the regulation and are clearer to the regulated public.

The provision in existing Section 5267(g) is proposed for deletion as existing Section 5263(f) already contains a similar provision and is proposed for transfer to proposed Section 5263(j). In addition, this proposal relocates this provision to a more appropriate location within the GISO and identifies this provision as a separate subsection within proposed Section 5262, as subsection (j).

### Subsection (g).

Existing subsection (g), proposed Section 5262(k), prohibits repairs and services using flame-producing devices on vehicles carrying explosives.

It is proposed to include a new provision to the GISO as proposed subsection (k) that prohibits vehicles carrying explosive materials to be taken to a repair shop for any purpose. The proposed prohibition regarding taking vehicles carrying explosive materials to a repair garage or shop is necessary as these facilities do not have the controlled environment required for the storage of explosive materials. There could be sources of ignition in these facilities that could cause or initiate a fire, igniting or causing the explosive materials to deflagrate or explode. In addition, the proposed transfer of these provisions presently contained in existing Section 1564(k) of the CSO, existing Section 7221(ℓ) of the MSO, and existing Section 8526(ℓ) of the TSO is necessary as all explosive regulations are proposed for repeal from the CSO, MSO, and TSO as a result of the proposed reorganization of the explosive safety orders.

As the result of the above proposal, the provisions of existing subsection (g), proposed subsection (k), are proposed to be renumbered as subsection (k)(1). In addition, it is proposed to include a prohibition of using “heat” producing devices for service or repairs on vehicles carrying explosive materials. This prohibition is necessary as the application of heat to an explosive material could result in an ignition and explosion of the explosive materials. Finally, it is proposed to substitute the term “explosives” with the term “explosive materials” to reflect terminology commonly used in the industry.

### Subsection (h).

Existing subsection (h), proposed subsection (ℓ), requires that vehicles containing explosives when stored comply with the quantity table in Section 5252.

It is proposed to revise proposed subsection (ℓ) to add the statement “for the appropriate class of explosive materials” and to repeal the reference to Section 5252. The reference to the appropriate explosive materials is proposed to clearly indicate the intent of the

Initial Statement of Reasons  
Explosives Reorganization

regulation to ensure the right quantity and distance figures are used. Therefore, the reference to Section 5252 is proposed for repeal as it is unnecessary.

Subsection (i).

Existing subsection (i), proposed Section 5262(m), prohibits a driver of a vehicle containing explosives from leaving the cab without first stopping the motor and setting the parking brake. In addition, all reasonable precautions shall be taken to prevent the movement of such vehicles.

A revision is proposed to proposed Section 5262(m) to substitute the term "explosives" with the word "explosive materials" to reflect language presently used by the industry. In addition, clarifying language is proposed to indicate that the driver is not to leave the vehicle without taking measures to ensure the vehicle will not move, and to delete an unnecessary modifying phrase. This proposal is necessary to clearly indicate that the driver is not to leave the vehicle until a positive action is taken to secure the vehicle from movement.

Subsection (j).

Existing subsection (j), proposed Section 5262(n), prohibits leaving the vehicle unattended or parked near areas where persons work unless an emergency condition exists.

Revisions are proposed to proposed Section 5262(n) to substitute the term "explosives" with the word "explosive materials" to reflect current industry terminology and to remove the unnecessary statement "Even though attended". This proposal is necessary to provide terminology commonly used in the industry and to remove unnecessary language.

It is the intent of this regulation to prohibit the parking of a vehicle containing explosive materials near places where persons are working, except those areas specifically designated for storage of explosive materials. Therefore, it is proposed to include where people "congregate" in proposed subsection (n) to include those areas where persons could be put at risk. This proposal is necessary to require the employer to choose areas to park a vehicle carrying explosive materials that does not put people at risk should an incident occur. In addition, it is proposed to delete the reference to Title 13, the California Vehicle Code. This reference is unnecessary as Title 13 is enforced by the California Highway Patrol and persons transporting hazardous materials already have to comply with the California Vehicle Code.

A definition for "attended" is proposed as a "NOTE" to proposed Section 5262(n). The existing "NOTE" to Section 5263(o) is proposed for transfer with minor editorial revisions as a "NOTE" to proposed subsection (n) to relocate it to a more appropriate location. This "NOTE" will clearly indicate that the vehicle operator or assistant is to be physically alert and capable of reaching the vehicle quickly, without interference. The reference to Title 13 in the "NOTE" to existing Section 5263(o) is proposed for deletion

Initial Statement of Reasons  
Explosives Reorganization

as it is informational only, and therefore, unnecessary, as persons transporting hazardous materials already have to comply with the California Vehicle Code.

Subsection (k).

Existing subsection (k), proposed Section 5262(o), prohibits flammable liquids from being carried in the vehicle's cargo space with explosives.

A revision is proposed to proposed Section 5256(o) to reference incompatible materials with examples to explicitly prohibit the transportation of any incompatible material in a vehicle cargo space with explosive materials. The intent of this proposal is to prevent the possibility of incompatible materials coming into contact with the explosive materials, resulting in an unwanted incident or explosion with the potential of employee/public injury. The provisions of subsection (o) are proposed for transfer from existing Section 5263(n), with revisions to include generic descriptions of the hazards in lieu of listing specific items/conditions.

Also, it is proposed to substitute the word "explosives" with the term "explosive materials" to reflect language presently used within the industry.

Subsection (l).

Existing subsection (l), proposed Section 5262(p), prohibits smoking, carrying matches or other flame producing device, unauthorized firearms, loaded cartridges while in or near a motor vehicle carrying explosives, or drive or unload the vehicle in a careless or reckless manner.

A revision is proposed to proposed Section 5262(p) to add the phrase "be permitted to" following the phrase "No person shall" to clearly indicate to the employer that instructions are to be given to employees prohibiting sources of ignition on or near the vehicle and to give instructions in the manner the vehicle is to be driven.

Subsection (m).

Existing subsection (m) prohibits the transporting of explosive materials, with the exception of those needed to promote the safety of the passengers or the operation of the vehicle, in or upon a public conveyance or vehicle carrying passengers for hire.

Subsection (m) is proposed for repeal as being unenforceable through Title 8 regulations. The California Highway Patrol actively enforces regulations promulgated by the USDOT with regards to transporting hazardous materials, and in what types of conveyances may be used on public streets and highways, and vehicles carrying passengers for hire. Therefore, existing subsection (m) merely duplicates the USDOT requirements.

Subsection (n).



## Initial Statement of Reasons Explosives Reorganization

Existing subsection (n) contains a statement that certain listed spark producing, reactive, corrosive, or contaminating materials cannot be carried loose in the cargo space of any motor truck and/or vehicle transporting explosive materials unless the loading of the hazardous materials complies with the USDOT regulations.

It is proposed to transfer the provisions of subsection (n) to proposed Section 5262(o), with revisions to substitute the listed specific items/conditions with generic descriptions of the hazards to provide clarity to the regulation and to repeal the provision allowing transportation when meeting the USDOT regulations as this provision is unnecessary because any vehicle carrying explosive materials must comply with USDOT regulations. This proposal prohibits the transportation of loose material in the cargo space of any motor vehicle/truck transporting explosive materials. This proposal is necessary to combine similar requirements into one subsection to eliminate duplication.

### Subsection (o).

Existing subsection (o) states that a vehicle transporting Class A or Class B explosives must be attended at all times. Also, the person attending the vehicle is to be familiar with the explosives being transported and in the procedures to ensure the safety of persons in the vicinity. In addition, existing subsection (o) states that the person is to have the authority to move the vehicle.

It is proposed to transfer the provisions of existing Section 5263(o) to proposed Section 5262(i), with revisions to remove unnecessary language and to delete the first provision regarding vehicles transporting Class A or Class B explosives shall be attended by a driver or other attendant of the motor carrier.

This proposed action is necessary as this proposal relocates these provisions to a more logical subsection within proposed Section 5262. The proposed repeal of the first provision of existing subsection (o) is necessary as proposed Section 5262(i) already contains a more specific and clearer requirement that states vehicles transporting explosive materials shall be driven by, and be in charge of, a licensed driver. The reference to the term “licensed driver” is necessary to ensure that the individual in charge has the knowledge necessary to safely operate the vehicle. Drivers operating vehicles transporting hazardous materials must be knowledgeable of the applicable governing codes and regulations. In addition, the proposed repeal of the specific explosive classes is necessary to reflect the proposed adoption of the international explosive materials classifications, Divisions 1.0 through 1.5 (see proposed Section 5252, TABLE EX-3). The proposed Divisions 1.0 through 1.5 explosive materials classification includes Class A and Class B explosives, thereby, making any reference to Class A or Class B explosives unnecessary.

Existing subsection (o)NOTE contains the definition for “attended”.

The accompanying existing NOTE to subsection (o) is proposed for transfer, with editorial revisions, to new subsection (n)NOTE to relocate it to a more appropriate

Initial Statement of Reasons  
Explosives Reorganization

location by placing the definition of “unattended” into the regulation addressing the prohibition of leaving a loaded vehicle unattended before reaching its destination. The reference to Title 13, the California Vehicle Code, in the “NOTE” to existing Section 5263(o) is proposed for deletion as it is informational and enforced by other agencies, and therefore, unnecessary.

New Subsection (q).

A new subsection (q) is proposed which requires the employer/licensed blaster to ensure explosive materials are only delivered to authorized persons and into authorized magazines or authorized temporary storage or handling areas.

Proposed subsection (q) is necessary to ensure explosive materials are delivered only to authorized persons and locations. In addition, the proposed inclusion of this requirement is necessary to be at least as effective as the federal counterpart regulation, 29CFR 1910.109(b)(3)(vi).

New Subsection (r).

A new subsection (r) to the GISO, which is proposed for transfer from existing Section 1564(e) of the CSO, will require that the transfer of explosive material from storage places be done in a manner that no undue delay occurs from the time they leave the storage area until they are used.

This proposed action is necessary to ensure that the requirement that explosive materials are transferred from storage areas and used with no undue delay is retained in the GISO as the result of the proposed reorganization of the explosive safety orders. This regulation was previously approved by the Office of Administrative Law and Region IX of Federal OSHA when the CSO explosive regulations were revised.

New Subsection (s).

A new subsection (s) is proposed which requires the employer/licensed blaster to inform the appropriate agencies when a transfer from vehicle to vehicle of explosive materials is to take place. Additionally, in the event of a breakdown or collision, the appropriate emergency services agencies shall be notified. The transfer of explosive materials will take place only when qualified supervision is provided.

Proposed subsection (s) is necessary to ensure that the proper authorities are notified when explosives are transferred from one vehicle to another. Additionally, the proper authorities, local emergency service agencies, are to be notified in the event of a breakdown or collision. A qualified person is to supervise the transfer of materials from the disabled vehicle. In addition, the proposed inclusion of this requirement is necessary to be at least as effective as the federal counterpart regulation contained in 29CFR 1910.109(d)(1)(iii).

Initial Statement of Reasons  
Explosives Reorganization

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5263, proposed Section 5262.)**

Section 5264. Transportation of Explosives-Underground-General.

An editorial revision is proposed to the title of existing Section 5264 to substitute the term "Explosive Materials" in place of the word "Explosives" to be consistent with industry terminology.

Wherever the word “explosives” appears within the subsections of existing Section 5264, it is proposed to substitute the word “explosives” with the term “explosive materials” to be consistent with industry terminology.

Subsection (a).

Existing subsection (a) contains the definitions for car, train, and trackless vehicle as used within this regulation.

These definitions are proposed for transfer to Section 5237 in the definition section of the explosives materials section of the GISO. Therefore, existing subsection (a) is not necessary. This proposal consolidates all the applicable definitions relating to explosive materials into one section.

Subsection (c).

Existing subsection (c), proposed subsection (b), requires detonators, capped fuses, or other explosives transported in any car, vehicle, or shaft conveyance be enclosed in containers equipped with tight fitting covers. These containers shall be made of wood, metal, fiber, or other materials acceptable to the Division.

Revisions are proposed to proposed subsection (b) to add the term "equivalent" before the word "material" to permit the employer to use covers made from materials other than wood, metal or fiber, recognizing there are man-made materials that are compatible with explosive materials suitable to be used when transporting these materials. This proposal is necessary to afford reasonable flexibility in the transportation of explosives. In addition, it is proposed to delete the phrase “acceptable to the Division” as it is not defined as to what would be acceptable to the Division, and therefore, this phrase is unnecessary.

Subsection (d).

Existing subsection (d), proposed subsection (c), prohibits detonators, primers, or capped fuses to be transported in the same container or compartment with other explosives and references Section 5264 as an exception.

Initial Statement of Reasons  
Explosives Reorganization

A revision is proposed to substitute the existing reference to Section 5263 with the reference to Section 5264(c)(1) to recognize the transfer of this requirement to its new location.

New Subsection (c)(1).

A new subsection (c)(1) is proposed to address the transportation of detonators and capped fuses on the same vehicle.

This new subsection is proposed for transfer from existing Section 5263(b) to recognize the unique concerns within underground explosive operations. This regulation is presently located within the surface transportation requirements for the transportation of explosive materials. This proposal is necessary to relocate an existing regulation to a more appropriate section within the GISO.

Subsection (e).

Existing subsection (e), proposed subsection (d), addresses the transportation of primers.

An editorial revision is proposed to substitute the reference to subsection (c) with the reference to subsection (b) to reflect the proposed renumbering of Section 5264 as the result of the proposed revisions to this section.

Subsection (f).

Existing subsection (f), proposed subsection (e), prohibits the transportation of materials and equipment with explosives that are not incidental to the blasting operation.

A revision is proposed to include the requirement that rock, ore, or other materials are not to be transported with explosive materials. This proposal is necessary as the prohibition of these materials are contained in existing Section 5267(f), a portion of these provisions are proposed for transfer and the other portion are proposed for repeal, that applies only to trackless vehicles. It is industry practice not to transport explosive materials underground on any vehicle with anything except that equipment and material used in the blasting operations.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5264.)**

Section 5265. Transportation of Explosives-Hoisting or Lowering.

The title to existing Section 5265 is proposed for revision to substitute the word "Explosives" with the term "Explosive Materials" and to include the word "Underground" following the proposed word "Materials" to reflect language used within the industry and to clearly indicate that these regulations apply to underground operations.

Initial Statement of Reasons  
Explosives Reorganization

Wherever the word “explosives” appears within the subsections of existing Section 5265, it is proposed to substitute the word “explosives” with the term “explosive materials” to be consistent with industry terminology.

Subsection (b).

Existing subsection (b) requires the hoistman to be notified before explosives are transported in the shaft conveyance.

An editorial revision is proposed to subsection (b) to delete the word “hoistman” and in its place include the term “hoist engineer” to eliminate specific gender references.

New Subsection (d).

A new subsection (d) is proposed which prohibits the handling or hoisting of ore, muck or other materials in an adjacent shaft compartment while explosive materials are being handled.

This new subsection is proposed for transfer from existing Section 7223(d) of the MSO and existing Section 8528(d) of the TSO to require employers/operators to ensure work activity in an adjacent shaft compartment is stopped during the movement and/or use of explosive materials. In addition, this proposal is necessary to address the hazard of conducting work in an adjacent shaft compartment when explosive materials are being handled to preclude the possibility of an incident being initiated, causing injury to employees.

New Subsection (e).

A new subsection (e) is proposed that prohibits the conveying of primers and detonators in the same shaft conveyance that explosive materials are being transported unless in a powder car.

Similar provisions of new subsection (e) are contained in the first provision of existing Section 8513(a) of the TSO that is proposed for transfer to this subsection. Also, it is industry practice not to transport primers and detonators together. This proposal is necessary to ensure California’s regulations are at least as effective as the federal counterpart regulation contained in 29CFR 1926.903(o).

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5265.)**

Section 5266. Rail Transportation of Explosives-Underground.

## Initial Statement of Reasons Explosives Reorganization

An editorial revision is proposed to the title of existing Section 5266 to substitute the term "Explosive Materials" in place of the word "Explosives" to be consistent with industry terminology.

Existing Section 5266 contains specific prohibitions to be followed during the transportation of explosives underground. In addition, placarding requirements are given for the special powder car.

Wherever the word "explosives" appears within the subsections of existing Section 5266, it is proposed to substitute the word "explosives" with the term "explosive materials" to be consistent with industry terminology.

### Subsection (a).

Existing subsection (a) requires only the train crew and powder men to be permitted to ride on a train transporting explosives.

An editorial revision is proposed to subsection (b) to delete the reference to "men" and replace it with the word "crew" to eliminate specific gender references.

### Subsection (b).

Existing subsection (b) requires that when 100 pounds or more of explosives are transported on a train, the explosives shall be in a special powder car.

A revision is proposed to subsection (b) to raise the amount of explosive materials that may be carried without the use of a special powder car to 110 pounds. This proposal is necessary because the explosives manufacturers' packaging system has been changed from pounds to kilograms. Two boxes of 25 kilograms make 110 pounds. Therefore, this proposal is necessary to permit the employer/licensed blaster to continue to carry up to two cases of explosive materials before having to use a special powder car.

### Subsection (c).

Existing subsection (c) prohibits the transportation of explosives on any locomotive.

A revision is proposed to subsection (c) to clearly indicate that explosive materials cannot be transported on or in any locomotive. This proposal is necessary to clearly require that the employer/licensed blaster transport the explosive materials remote from the locomotive.

### Subsection (f).

Existing subsection (f) requires that when primers are transported in the powder car, they will be carried in a suitable box with divisions for each separate delay. In addition, when

Initial Statement of Reasons  
Explosives Reorganization

capped fuses are transported, they will be in suitable containers. The primer and powder compartments must be separated by an air space of at least 25 inches.

A revision is proposed to subsection (f) to substitute the word "shall" in place of the word "must" to maintain a format consistent with that which exists in Title 8.

Section 5267. Transportation of Explosives-Underground-Special Trackless Vehicles.

An editorial revision is proposed to the title of existing Section 5267 to substitute the term "Explosive Materials" in place of the word "Explosives" to be consistent with industry terminology.

Wherever the word "explosives" appears within the subsections of existing Section 5267, it is proposed to substitute the word "explosives" with the term "explosive materials" to be consistent with industry terminology. This proposal is editorial in nature and therefore, will have no effect on the regulated public.

Subsection (a).

Existing subsection (a) requires that trackless vehicles used to transport explosives underground be truck-type, but not equipped with a dump body.

It is proposed to repeal subsection (a) as existing subsections (b) and (c), proposed subsections (a) and (b), are specific regarding the equipping of vehicles for the addressed purpose such as closed compartment that prevents accidental dumping. This proposal is necessary to eliminate a regulation that is contained in the provisions of proposed subsections (a) and (b). Therefore, existing subsection (a) is unnecessary.

Subsection (b).

Existing subsection (b), proposed subsection (a), requires that vehicles used to transport explosives are to be especially equipped for that purpose.

Revisions are proposed to proposed subsection (a) to substitute the reference to Section 5263 with the reference to Section 5262 to reflect the proposed consolidation of existing Section 5263 into proposed Section 5262 and to delete an unnecessary phrase "of these Orders".

Subsection (f).

Existing subsection (f) states trackless vehicles transporting explosives are not to contain rock, ore, or other materials or equipment except those used for blasting.

The provisions of subsection (f) specifying "rock, ore, other materials" are proposed for transfer to proposed Section 5264(e) as it relocates this provision to a more appropriate location in the GISO and provides clarity to the regulation. The remaining provisions of

Initial Statement of Reasons  
Explosives Reorganization

subsection (f) regarding explosives shall not be transported with other materials or equipment are proposed for repeal as proposed Section 5264(e) already contains these requirements and therefore, is unnecessary. This proposal is necessary to eliminate duplication of requirements.

Subsection (g).

Existing subsection (g) permits only the blaster and vehicle operator to ride on the vehicle carrying the explosives.

Subsection (g) is proposed for repeal as existing Section 5263(f) contains similar provisions and is proposed for revisions to a more appropriate location in the “general” transportation section of proposed Section 5262(j) that permits the vehicle operator and powder crew to ride on the vehicle. The proposal to repeal this subsection is necessary to eliminate duplicative regulations. Labor Code, Section 7990 requires the employer to ensure blasting operations are under the supervision of a licensed blaster. Therefore, the reference to the blaster is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5267.)**

Section 5268. Transportation of Explosives-Manual.

An editorial revision is proposed to the title of existing Section 5268 to substitute the term "Explosive Materials" in place of the word "Explosives" to be consistent with industry terminology.

Subsection (a).

Existing subsection (a) requires that explosives that are transported manually be placed in suitable bags or other containers.

Subsection (a) is proposed for revision to substitute the word "explosives" with the term "explosive materials" to be consistent with industry terminology.

Subsection (b).

Existing subsection (b) requires that detonators and primers be transported in separate bags or containers.

Revisions are proposed to subsection (b) to prohibit the manual transportation of detonators and primers within the same containers of other explosive materials to clearly indicate that detonators and primers are to be carried separately, not with other explosive materials, to prevent an accident if for some unknown reason a detonator was to explode. This proposal is necessary to be consistent with current industry practice. In addition, it



Initial Statement of Reasons  
Explosives Reorganization

is proposed to substitute the word "explosives" with the word "explosive materials" to be consistent with industry terminology.

Section 5269. Transportation of Explosives-Air and Water.

An editorial revision is proposed to the title of existing Section 5269 to substitute the term "Explosive Materials" in place of the word "Explosives" to be consistent with industry terminology.

Section 5270. Explosives at Railway and Truck Terminals.

An editorial revision is proposed to the title of existing Section 5270 to substitute the term "Explosive Materials" in place of the word "Explosives" to be consistent with industry terminology.

Existing Section 5270(a) requires that every railway car or truck containing explosives which has reached its destination or stopped and is no longer in interstate commerce shall remain placarded in accordance with the appropriate U.S. Department of Transportation regulations.

It is proposed to revise subsection (a) to substitute the term "explosive materials" in place of the word "explosives" to be consistent with industry terminology.

**Article 116. Handling and Use of Explosives-Blasting Operations.**

An editorial revision is proposed to the title of existing Article 16 to substitute the word "Explosives" with the term "Explosive Materials" to reflect terminology used within the industry and to include the word "in" and to delete the "dash" following the proposed word "Materials" to clarify that these regulations apply to the handling and use of explosive materials in blasting operations to read as entitled "Handling and Use of Explosive Materials in Blasting Operations".

Section 5276. General.

Wherever the word "explosives" appears within the subsections of existing Section 5276, it is proposed to substitute the word "explosives" with the term "explosive materials" to be consistent with industry terminology.

Subsection (a).

Existing subsection (a) requires that only authorized competent persons be in immediate charge of blasting.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (a) is proposed for repeal as Labor Code, Section 6710 and proposed Section 5238(a) require that blasting operations be under the direct supervision of a licensed blaster and therefore, this subsection is unnecessary.

Subsection (b)

Existing subsection (b), proposed subsection (a), prohibits smoking or open flames within 50 feet of any area where explosives are being handled.

It is proposed to revise subsection (a) to prohibit other sources of ignition with an exception for devices necessary to ignite the fuses. This proposal will clarify that any source of ignition that could cause ignition or rapid deterioration of the explosive materials is prohibited within 50 feet of explosive material.

A “NOTE” is proposed to clarify that internal combustion engines equipped with spark arresters that are designed and functioning properly are not considered sources of ignition. This proposal is necessary to relieve the employer of an unnecessary and potentially burdensome requirement. In underground operations, a scrubber is often used to filter exhaust fumes emitted from diesel powered equipment, removing the carbon monoxide from the exhaust fumes. The scrubber also effectively blocks the emission of itinerant sparks that could ignite the explosive materials.

Subsection (c).

Existing subsection (c) prohibits energized power cables or sources of ignition except those necessary to the loading and firing operations in an area containing loaded holes.

Subsection (c) is proposed for repeal as its intent is addressed in proposed Section 5276(d) and Section 5299(g). Therefore, the provision of subsection (c) is unnecessary.

Subsection (e).

Existing subsection (e), proposed subsection (c), prohibits the reuse of empty boxes and paper and fiber packing materials that have previously contained high explosives. An EXCEPTION is provided to permit the use of containers designed and maintained for reuse.

Editorial revisions to subsection (c) are proposed for clarity including the addition of the word “other” before the word “purpose” to specify in the regulation that packing containers with high explosives shall not be used again for any other purpose.

Subsection (f).

Existing subsection (f), proposed subsection (d), prohibits explosives from being placed or left within five feet of electrical light or power circuit except during transportation.

## Initial Statement of Reasons Explosives Reorganization

Subsection (d) is proposed for revisions to delete the phrase “or left” as this language is unnecessary and to clearly indicate that explosives are not to be placed within 25 feet of exposed electrical circuits. This proposal is necessary to be consistent with the existing provisions of Section 1565(d) of the CSO. The provisions of existing subsection (f) are similar to the existing provisions of Section 7230(f) of the MSO and the existing provisions of Section 8535(f) of the TSO that are proposed for repeal to eliminate duplicative regulations throughout Title 8.

In addition, it is proposed to substitute the phrase “electrical circuits” in place of the phrase “electric light circuit or electrical power circuits” as electric light circuit or electric power circuit are electrical circuits and therefore, unnecessary to reference in the regulation.

### Subsection (g).

Existing subsection (g), proposed subsection (e), lists specific explosive devices or materials that when they are left over from loading operations are to be promptly returned to the appropriate magazine.

Subsection (g) is proposed for revisions to delete the unnecessary references to specific types of explosives as the references listed are explosive materials and to insert the generic term “explosive materials” to be consistent with terminology used within the industry.

### Subsection (h).

Existing subsection (h), proposed subsection (f), requires that provisions be made to prevent flying rock or material that may damage property and to ensure that an adequate blasting mat has been securely anchored.

It is proposed in subsection (f) to include the phrase “...or endanger employees...” to indicate the employer must consider employee safety, as well as property damage, when preparing to blast. This proposal is necessary to ensure employee safety. Also, the adjectives “adequate” and “securely” are proposed for repeal. The word “adequate” is unnecessary as the blasting mat either does or does not mitigate the anticipated hazard of flying material. The word “securely” is unnecessary as the word “anchored” implies securely fastened.

### New Subsection (g).

A new subsection (g) is proposed to prohibit persons under the age of 21 years from entering an explosive storage magazine or handling, using, or transporting explosive materials. In addition, an EXCEPTION is provided for those persons 18 years or older who are under the direct supervision of a licensed blaster.

Proposed subsection (g) is necessary to ensure that only those persons who are at least 21

## Initial Statement of Reasons Explosives Reorganization

years of age are permitted to work with or handle explosive materials, and then only under controlled conditions. The proposed “EXCEPTION” is necessary to ensure that persons under the age of 18 years are prohibited from working in or around a blasting operation. The provisions are also contained in existing Section 5238(a) and (b), existing Section 7200 and 7275(c) of the MSO, and existing Section 8505 of the TSO that are proposed for transfer to proposed new subsection (g).

### New Subsection (h).

A new subsection (h) is proposed to require that the employer/user promptly clean up spilled explosives.

Proposed subsection (h) is necessary to ensure that there are no spilled explosive materials left on the ground/surface on which someone could step onto or drop something onto, causing a spark or exerting enough pressure to cause an incident. Also, the material could become packed into the soles of shoes and be carried and further exposed to detonation.

Similar requirements are contained in existing Section 5312(j) pertaining to explosives loading and assembly operations and proposed Section 5329(m) pertaining to manufacturing operations covering completely different types of operations.

### New Subsection (i).

A new subsection (i) is proposed to require that the employer/user ensure that explosive materials are not subjected to excessive heat, friction, or force.

Proposed subsection (i) is necessary to ensure that explosive materials are not placed in locations where they might be heated, dragged, or struck by an object which could cause ignition or an explosion.

Similar requirements are contained in existing Section 5312(k) pertaining to explosives loading and assembly operations covering a completely different type of operation.

### New Subsection (j).

A new subsection (j) is proposed to require the employer/user to use the appropriate explosive materials for the environmental conditions expected to be encountered.

Proposed subsection (j) is necessary to ensure that explosive materials are used at temperatures as recommended by the manufacturer. This proposed language was recommended by the advisory committee to clarify the use of the proper explosives for the environmental conditions expected.

### New Subsection (ℓ).

## Initial Statement of Reasons Explosives Reorganization

New subsection (ℓ) requires the employer/licensed blaster to instruct and ensure that fire suppression is not attempted, employees are moved to a safe area, and the fire area guarded against intruders where explosive materials are in imminent danger of contact with a fire.

This proposal will have no effect on the regulated public as these provisions already exist and are proposed for transfer from existing Section 1565(ℓ) of the CSO, which are proposed for repeal, to reflect the proposed reorganization of the explosive safety orders.

Proposed new subsection (ℓ) is necessary to ensure that there is no attempt by employees to suppress a fire involving explosive materials. The provisions are also contained in existing Section 1565(ℓ) of the CSO that are proposed for transfer to proposed new subsection (ℓ).

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5276.)**

### Section 5277. Tamping Poles and Devices.

The title of Section 5277 addresses tamping poles and devices.

The title of Section 5277 is proposed for revision to substitute the word "or" in place of the word "and" to be consistent with the proposed revisions to the regulatory language. This proposal indicates to the reader that there are “devices” in addition to tamping poles that are available for final seating of explosive materials in a bore/shot hole.

### Subsection (a).

Existing subsection (a) states what material a tamping pole is to be made of.

Revisions are proposed to subsection (a) to reference “devices” in the regulation, to delete the adjective “acceptable”, and to indicate the pole is to be manufactured for the purpose of tamping explosives. These proposed revisions require the employer/user to ensure that poles or devices used for tamping have been manufactured for that purpose.

The proposal to include the phrase "or device" is necessary to recognize that there are other tools or devices for ensuring the explosive materials are tamped into place in the bore hole. Also, the proposal to delete the adjective “acceptable” is necessary as this word is vague. In addition, the proposal to indicate plastic materials manufactured for tamping explosives is necessary so that only plastic materials manufactured specifically for tamping explosives are utilized. The provisions are also contained in existing Section 1567(ℓ) of the CSO; existing Section 7231(a) and (d) of the MSO; and existing Section 8536(a) and (d) of the TSO, that are proposed for transfer to proposed subsection (a).

Also, it is proposed to add a “NOTE” to provide information to the employer/user of the negative characteristics of some plastics.

Initial Statement of Reasons  
Explosives Reorganization

This NOTE is proposed for transfer from existing subsection (d)NOTE, existing Section 7231(d)NOTE of the MSO, and existing Section 8536(d)NOTE of the TSO, with revisions to delete the reference to the acceptance by the Division, and also existing Section 1567(ℓ)NOTE of the CSO, that are proposed for transfer to proposed subsection (a)NOTE. The reference to “acceptance” is vague and therefore, this provision is unnecessary.

Subsection (d).

Existing subsection (d) states that plastic tamping poles shall not be used unless their use has been accepted by the Division.

Subsection (d) is proposed for repeal as the proposed revisions to subsection (a) will address the concerns of using equipment that is compatible with the explosive materials being used.

The NOTE to subsection (d) is proposed for revision to delete the reference to the Division and the manufacturer, as the proposed revisions to subsection (a) will address these concerns. In addition, it is proposed to transfer the NOTE to follow subsection (a). The NOTE is necessary to inform the users of tamping poles or devices the purpose for using only poles or devices manufactured for tamping explosives, and not using "jury-rigged" pieces of PVC or other inappropriate plastic materials that could cause a premature ignition.

In addition, the provisions of this NOTE are also contained and are proposed for transfer from existing Section 1567(ℓ)NOTE of the CSO, existing Section 7231(d)NOTE of the MSO, and existing Section 8536(d)NOTE of the TSO, which are proposed for repeal, to reflect the proposed reorganization of the explosive safety orders.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5277.)**

Section 5278. Loading of Explosives Materials-General.

New Subsection (b).

A new subsection (b) is proposed to require that at least 5 foot candle lighting is provided to ensure safe loading operations. Also, this proposal requires the use of approved lights when they are placed within 50 feet of the loading operation.

Proposed subsection (b) is necessary to ensure adequate lighting is provided during loading operations to ensure the safety of employees. These provisions are also contained in existing Section 8537(t) of the TSO that is proposed for transfer to new subsection (b), as the result of the proposed reorganization of the explosives safety orders. The amount of adequate illumination is stipulated in Section 1523 of the CSO.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (c).

Existing subsection (c), proposed subsection (d), requires that loading operations be conducted with the smallest practical number of employees present, requiring persons not associated with the loading operation to be at least 50 feet from the loading area. In addition, an “EXCEPTION” is included specifying the requirements at locations where the 50 foot minimum distance cannot be maintained.

Subsection (c) is proposed for revisions to indicate that explosive materials loading equipment be present and permitted to be within 50 feet of the loading operation. This proposal is necessary to clarify the intent of the regulation.

Also, it is proposed to delete the word “EXCEPTION” and editorially revise wording to delete the word “feet” and include the phrase “foot minimum distance” to provide clarity to the regulation to specify that the regulation is referring to distance. Instead of including the word “EXCEPTION” in the regulation, it is proposed to transfer the provisions of existing Section 1567(c)(1) to proposed Section 5278(d)(1) and therefore, deleting the existing reference to Section 1567(c) of the CSO, as this reference is unnecessary. In addition, it is proposed to transfer to a more appropriate location in Section 5278(d)(2) the provisions of existing Section 1567(c)(2)(A) – (D). This proposal is necessary to ensure retention of the existing CSO regulation within the GISO.

Subsection (g).

Existing subsection (g), proposed subsection (h), requires that when tamping explosives in a borehole that the tamping be done by pressure or by light blows. The primer shall not be tamped.

A revision is proposed to subsection (h) to delete the specific reference to explosives in a borehole. Tamping is only accomplished in boreholes, therefore, this statement is redundant and unnecessary.

Subsection (h).

Existing subsection (h), proposed subsection (i), requires that all blast holes be stemmed to a point that will sufficiently contain the charge.

A revision is proposed to subsection (i) to clearly indicate that it is during open or above ground work that stemming is necessary and stemming should be accomplished. This proposed revision is necessary to reflect industry practice.

Subsection (j)(3).

## Initial Statement of Reasons Explosives Reorganization

Existing subsection (j)(3) states that drop fuses or other methods that calls for ignition of the fuse prior to placement of the charge in its final position shall not be used, except for avalanche blasting.

It is proposed to renumber existing subsection (j)(3) to subsection (ℓ). This proposal is editorial in nature and is necessary as this provision does not pertain specifically to springing holes.

### Subsection (m).

Existing subsection (m), proposed subsection (o), requires that blasting holes be charged as near to blasting time as practical. Also, the charges are to be detonated as soon as possible, but not to exceed 72 hours after charging provided the requirements of Section 5278(q) are complied with.

Revisions are proposed to subsection (o) to permit only geophysical operations to be exempt from this regulation as the provisions of Section 5278(w), if followed, will not cause injuries to the employees. The nature of geophysical operations requires separate crews to prepare drilling, loading, and detonating the loaded holes for the operation of seismic testing, and it requires time between loading and detonation to prepare testing equipment installation. The proposed exception for Section 5278(w) is necessary as the advisory committee discussed that geophysical operations may require the charging of a hole days in advance of the blasting date because of the number, locations and depths of the boreholes necessary to obtain the required information. The proposed revision to place this exception at the beginning of the requirement is proposed to clarify the regulation and does not effect the existing requirement.

The proposed repeal of the statement that permits blasting to take place up to 72 hours after the completion of charging is necessary to conform to industry practice. During the advisory committee, it was determined that charged holes are blasted as soon as possible after charging, and that a 72 hour delay is not acceptable.

### New Subsection (o)(1)

New subsection (o)(1) requires that no explosive materials be left unattended at the blast site.

Proposed subsection (o)(1) is necessary to ensure continuity of this requirement that explosive materials are not left unattended at the blast site. These provisions are also contained in Section 1565(o) of the CSO that are proposed for transfer to new subsection (o)(1).

### New Subsection (o)(2).



Initial Statement of Reasons  
Explosives Reorganization

New subsection (o)(2) requires that the employer/licensed blaster make provisions to ensure that the loaded holes are not left unattended, except as permitted in Section 5278(w).

Proposed subsection (o)(2) is necessary to ensure continuity of this requirement that loaded holes are not to be left unattended. These provisions are also contained in Section 1565(j) of the CSO that are proposed for transfer to new subsection (o)(2). An exception statement is proposed to recognize that geophysical operations often require that drilled and loaded holes are left unattended when specific conditions exist.

Subsection (u).

Existing subsection (u) states that different brands of electric detonators shall not be used in the same round.

It is proposed to transfer the requirements of subsection (u) to proposed Section 5299(j) as Section 5299 pertains to firing with electricity. This proposal is necessary to relocate these provisions to a more appropriate location within the GISO, specifically Section 5299 that pertains to firing with electricity.

In addition, similar provisions are currently contained in existing Section 1573(c) of the CSO, existing Section 7232(q) of the MSO, and existing Section 8537(p) of the TSO that are proposed for repeal to eliminate duplicative regulations throughout Title 8.

Subsection (v).

Existing subsection (v), proposed subsection (w), requires that loaded holes intended for geophysical operations shall be either attended; or anchored, tamped or stemmed so that the charge cannot be removed or left so that the detonators leads are inaccessible to or concealed from unauthorized persons.

In addition to minor editorial revisions to clarify the intent of the regulation, it is proposed to revise subsection (w) to include new language as proposed subsection (w)(2) that ensures unattended loaded holes intended for geophysical operations be loaded in such a manner that should a detonation occur, no injuries could occur. As a result of this proposal, it is proposed to reformat this subsection to clarify the intent of the regulation. This proposal clarifies the original intent of the regulation to specifically state the condition of a loaded hole not attended by a watch person. This proposal is necessary to ensure that in geophysical blasting operations, when the charged holes are left unattended, the charge is set so that if a detonation did occur, debris or material would not be propelled into the air or where persons could be struck.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5278.)**

Section 5279. Loading and Blasting Near and Under Power Lines.

Initial Statement of Reasons  
Explosives Reorganization

The title to this regulation applies to operations near and under power lines.

A revision is proposed to the title of Section 5279 to substitute the word “or” in place of the word “and”. This proposal is necessary to clearly indicate that both conditions, blasting operations near or blasting operations under power lines, will be required to comply with Section 5279 and not just when the condition of loading and blasting near and under the power lines is met. In addition, this proposal is also necessary to be consistent with the existing regulatory language of Section 5279.

Subsection (a).

Existing subsection (a) requires that when surface blasting under or near overhead power lines, the leading wires are to be placed at right angles of the power lines, and securely anchored to prevent the lead wires from being thrown into the overhead lines as the result of the blasting operation.

A revision is proposed to subsection (a) to substitute the term "electric initiated" in place of the word "surface" blasting. This proposed clarifying language “electric initiated” is necessary because non-electric initiating blasting circuits would not be thrown upwards into the electrical lines as would a hard wired circuit. Also, non-electric systems are not affected by induced currents in the same manner as wired or electric initiated blasting would be. Also, it is proposed to repeal the word "surface" as it is unnecessary. The underground blasting regulations already prohibit loading and blasting within specified distances of electrical wiring.

Subsection (b).

Existing subsection (b) requires that the loaded holes are to be covered with an adequate nonconductive blasting mat securely anchored to prevent material from being blown into the overhead lines.

Revisions are proposed to subsection (b) to delete the adjectives “adequate” and “securely” from subsection (b). The word “adequate” is unnecessary as the nonconductive blasting mat either does or does not mitigate the anticipated hazard of flying material. The word “securely” is unnecessary as the word “anchored” implies securely fastened.

Section 5280. Pneumatic Loading of Explosives for Blasting.

The existing Section 5280 is entitled “Pneumatic Loading of Explosives for Blasting.”

A revision is proposed to the title of Section 5280 to substitute the term "Explosive Materials" in place of the word “Explosives” to be consistent with industry terminology.

## Initial Statement of Reasons Explosives Reorganization

Wherever the word “explosives” appears within the subsections of existing Section 5280, it is proposed to substitute the word “explosives” with the term “explosive materials” to be consistent with industry terminology.

### Subsection (a).

Existing subsection (a) contains an application statement for this section.

Subsection (a) is proposed for repeal as it merely iterates what Section 5280 applies to. The existing provisions of Section 5280 are already clear on the intent. Therefore, this explanation is unnecessary.

### Subsection (b). Definitions.

Existing subsection (b) contains the definitions for the terms used within Section 5280.

The definitions in subsection (b) are proposed for transfer to Section 5237 to consolidate all the definitions into one section, the definition section for Group 18.

### Subsection (c). Construction of Air Loaders.

Existing subsection (c), proposed subsection (a)(1), prohibits the loading of nitro-carbo-nitrate into any air loader constructed of copper alloys or zinc materials that will react with the explosive materials.

The proposal to substitute the term "blasting agent" in place of the term "nitro-carbo-nitrate" in existing subsection (c)(1), proposed subsection (a)(1), is necessary to be consistent with the revisions proposed for Group 18 with the inclusion of the terms explosive materials and blasting agents.

### Subsection (c)(3).

Existing subsection (c)(3), proposed subsection (a)(3), requires that pressurized air loaders be designed, constructed, inspected and stamped in compliance with the Unfired Pressure Vessel Safety Orders of the Division of Industrial Safety for a maximum allowable working pressure of at least 125 psi.

Subsection (a)(3) is proposed for revision to delete the outdated reference to the Division of Industrial Safety and the unnecessary specific reference to 125 psi. The preceding reference to the Unfired Pressure Vessel Safety Orders is sufficient to provide the necessary guidance to the users/owners of air loaders; therefore, making any other references redundant and unnecessary.

### Subsection (d). Air Loader Equipment.

### Subsection (d)(1).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (d)(1), proposed subsection (b)(1), requires that an air trap or a filter of a specific mesh size be installed on the air supply line adjacent to the loader when a pressure vessel is used.

Subsection (b)(1) is proposed for revision to remove the unnecessary phrase "...or when an explosive is being loaded." The intent of these regulations is to address conditions when the devices are being used to perform the function for which they were designed. Therefore, the phrase "...is being used" will convey the intent of the regulation and further explanation is redundant, and therefore, unnecessary.

Subsection (d)(2).

Existing subsection (d)(2), proposed subsection (b)(2), requires the installation of a standard manufactured air pressure reducing regulator in the air supply line and that it shall be part of the loader assembly for a pressure-type loader.

Existing subsection (d)(2), proposed subsection (b)(2), is proposed for revision to delete the second "shall" as being redundant, and therefore, unnecessary.

Subsection (e). Air Temperature and Pressure.

Subsection (e)(3).

Existing subsection (e)(3), proposed subsection (c)(3), requires that when an explosive is being loaded, the air pressure relieving safety valve shall be set to open at a pressure not to exceed 55 pounds per square inch (psi). In addition, when a blasting agent is being loaded, the safety valve shall be set at not more than 110% of the safe loading pressure, but in no case to exceed 110 psi.

It is proposed to identify the last sentence in subsection (c)(3) as new subsection (c)(4). This proposal provides clarity in the regulations by specifying this requirement as a separate provision.

Subsection (f). Control of Static Electricity and Stray Currents.

Subsection (f)(1).

Existing subsection (f)(1), proposed subsection (d)(1), requires that a continuous electrical path be provided from the discharge end of the loading tube, through the loading tube, the loading line, the air loader, and to the ground and includes a statement describing a normal equipment to earth grounding condition. In addition, the discussion elaborates on how grounding can be accomplished when conditions are not ideal.

The informative statement regarding metal air loaders resting directly on the ground in proposed subsection (d)(1) is proposed for deletion as it is informational only and not a

## Initial Statement of Reasons Explosives Reorganization

regulation, and therefore, it is not necessary. The sentence beginning with "However" is proposed for revision by inserting the clarifying phrase "Where metal air loaders are on..." to retain the requirement for grounding the equipment when it is located on non-conductive rock or earth. It is proposed to identify this requirement as new subsection (d)(2) to specify this requirement as a separate provision.

### New Subsection (d)(3).

New subsection (d)(3) is proposed to prohibit the grounding of pneumatic loading equipment to water lines, airlines, rails, or other permanent electrical grounding systems.

Proposed subsection (d)(3) is necessary to eliminate the possibility of unwanted ignition of explosive materials resulting from an electrical fault that was transmitted from another system through the common grounding conductor. These requirements are also contained in existing Section 7234(d)(1) of the MSO and existing Section 8539(d)(1) of the TSO and are proposed for transfer into the GISO, as a result of the proposed reorganization of the explosive safety orders.

### Subsection (f)(3).

Existing subsection (f)(3) prohibits loading operations during the time an electrical storm is approaching or in progress.

It is proposed to transfer the requirements of subsection (f)(3) to proposed Section 5245(a) as Section 5245 pertains to "Blasting Operations During Lightning and Dust Storms." This proposal is necessary to relocate these provisions to a more appropriate location within the GISO, specifically Section 5245 that pertains to blasting operations during lightning and dust storms.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5280.)**

### Section 5291. Firing of Explosives.

The title of existing Section 5291 is entitled "Firing of Explosives".

A revision is proposed to the title of Section 5291 to include the parenthetical phrase "(Blasting Operations)" to indicate the type of operation this regulation addresses. Explosives are also fired within industrial environments and are addressed elsewhere in these orders.

### Subsection (a).

Existing subsection (a) requires the employer or his designated representative to fix the time of blasting.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (a) to require that the licensed blaster-in-charge fix the time of blasting. The existing provision regarding the duty of the employer or delegated representative to fix the time of blasting does not fit what actually takes place at a blast site. Although the licensed blaster is the delegated employer representative, there may be others at the site with equal authority. Therefore, because all blasting is to be under the authority of the licensed blaster, it is necessary to require that a licensed blaster-in-charge be responsible for setting the time of blasting. The licensed blaster-in-charge is most familiar with the operation and when blasting should take place.

A “NOTE” to subsection (a) relating to conducting blasting operations insofar as possible between sunup and sundown is proposed for repeal as this “NOTE” is unenforceable and adds no meaning to the regulation.

### Subsection (b).

Existing subsection (b) requires that a positive signal and definite assurance that all surplus explosives are in a safe place and personnel are in a place of safety.

It is proposed to revise subsection (b) to delete an unnecessary adjective, to clarify the type of signal required, to permit procedures as well as signals, and to specifically state when the blast may be fired.

The proposed substitution of the word “warning” in place of the word “positive” and the inclusion of the term “procedure” in subsection (b) are necessary to recognize that not all signals/procedures can be considered “positive”, as noted in existing subsection (c). Also, the inclusion of the term “until” preceding the word “definite” is necessary to clearly indicate that those specific listed items are to be accomplished before blasting takes place. In addition, this proposal is necessary to permit the employer to use alternatives to signals and require the blasting to be delayed until all safeguards have been met.

### Subsection (c).

Existing subsection (c) requires that precautions such as warning signs, barricades, or flagmen be taken to prevent the unauthorized entry into the blast area.

It is proposed to revise subsection (c) to substitute the phrase "such as the following" in place of the phrase "including, but not limited to" with corresponding punctuation revisions, and to delete a specific gender reference. This proposal is necessary to better denote the examples given in the subsection are alternative methods.

### Subsection (d).

Existing subsection (d) requires that warning signals be given when firing explosives. This subsection gives examples of types or methods for giving signals.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (d) to transfer the existing signaling requirements contained in existing Section 1566(d) of the CSO, with editorial revisions. This proposed inclusion of the signal requirements indicate that audible warnings are to be loud enough to be heard at the most distant point in the blast area. This proposal is necessary to ensure all affected persons are aware when a blast is going to take place.

In addition, it is proposed to include in subsection (d) those audible warning signals currently contained in existing Section 1566(d) of the CSO. This proposal is necessary to ensure retention of this regulation, as the construction explosive regulations are proposed for repeal or transferred, into the GISO as a result of the proposed reorganization of the explosive safety orders.

### New Subsection (e).

New subsection (e) is proposed that requires the type of method of warning to be conspicuously posted and the employees to be made familiar and instructed in the signals.

Proposed subsection (e) is necessary to ensure that the employees are informed of the type or method of warning of an impending blast that will be used, that the employees are made familiar with the signals, and information regarding the warning signal or method used is conspicuously posted for all employees to see. These requirements are also contained in existing Section 1566(c) of the CSO and are proposed for transfer into the GISO, with minor editorial revisions, to provide clarity, as a result of the proposed reorganization of the explosive safety orders.

### New Subsection (f).

New subsection (f) is proposed that requires the licensed blaster to visually inspect the blast area before the "all clear" signal is given. In addition, this subsection states that when misfires are found, the provisions of Section 5293 are to be followed before the "all clear" signal is given.

Proposed subsection (f) is necessary to ensure that employees/private persons are not injured/killed as the result of an unknown source of explosive materials exploding/burning. These requirements are also contained in existing Section 1566(f) of the CSO and are proposed for transfer into the GISO, as a result of the proposed reorganization of the explosive safety orders.

### New Subsection (g).

New subsection (g) requires the employer/blaster to post warning signs at the access locations with specific size lettering on a contrasting background indicating the approach/approaches to a blast area.

Proposed new subsection (g) is necessary to ensure that warning signs having letters at least 4 inches in height are posted at all approaches to the blast site. This proposal is

## Initial Statement of Reasons Explosives Reorganization

necessary to mitigate the possibility of an unauthorized person entering the area. In addition, this proposal is also necessary to make California's regulation "at least as effective as" the counterpart federal regulation contained in 29CFR 1926.905(p).

### Subsection (e).

Existing subsection (e), proposed subsection (h), requires that utility representatives be notified at least 24 hours in advance of blasting when the operation is in the vicinity of the affected utility. Also, verbal notice shall be confirmed with written notice.

It is proposed to revise subsection (h) to include the word "pipelines" prior to the existing word "gas" and to include the phrase "flammable liquid gas pipelines" to make it clear the meaning of "gas" in the existing language. In addition, it is proposed to include the phrase "pipelines or" prior to the word "utilities" to clarify that pipeline operators/representatives are to be notified prior to initiating blasting operations. This proposal is necessary to clarify the original intent of the regulation as the existing word "gas" means gas pipelines and flammable liquid gas pipelines.

In addition, it is proposed to revise subsection (h) to include the phrase "before the blast" following the language "Verbal notice shall be confirmed with written notice" to clarify when written notice needs to be confirmed to ensure that the owner(s) of the pipelines or utilities was/were notified in advance prior to the blast.

The term "licensed" is proposed to be included before the word "blaster" to be consistent with Labor Code, Section 7990 that requires blasting operations be under the direct supervision of a licensed blaster and also to be consistent with the proposed revisions throughout Group 18 regulations.

### New Subsection (i).

New subsection (i) is proposed that requires the employer/blaster to inspect the blast area to ascertain if there are any residual toxic vapors/fumes which could be hazardous to employees and to ensure the hazards have been reduced to a safe level prior to permitting entry into the site.

This proposal is necessary to address those operations where there may be reason to suspect that toxic vapors/fumes, dust or gases may be present which could be a hazard to employees. For this reason, it is proposed that these hazards are to be reduced to a safe limit prior to permitting re-entry into the blast area. The provisions of proposed subsection (i) are currently contained in existing Section 8537(x) of the TSO and is proposed for transfer into the GISO, as a result of the proposed reorganization of the explosive safety orders.

### New Subsection (j).



Initial Statement of Reasons  
Explosives Reorganization

New subsection (j) is proposed to address post-blasting operations and requires after blasting, the blasting crew to wait at least 5 minutes before returning to the point of blasting.

Proposed subsection (j) is necessary to ensure a minimum waiting period is accomplished before re-entering a blast site. The provisions of proposed subsection (j) are currently contained in existing Section 1578(b) of the CSO and existing Section 8537(x) of the TSO and are proposed for transfer into the GISO, as a result of the proposed reorganization of the explosive safety orders.

New Subsection (k).

New subsection (k) is proposed to require, when blasting underground, a minimum 15 minute wait before anyone is to enter a place where primary blasting has been done using power and lighting circuits.

Proposed subsection (k) is necessary to prohibit the entry of persons into an area where blasting has just taken place until toxic vapors/fumes and dust have been reduced to safe limits. The provisions of proposed subsection (k) are currently contained in Section 5304(f) of the GISO and are proposed for transfer to a more appropriate location in the GISO as subsection (k). In addition, the provisions of subsection (k) are currently contained in existing Section 7254(f) of the MSO and existing Section 8552(f) of the TSO and are proposed for transfer into the GISO, as a result of the proposed reorganization of the explosive safety orders.

In addition, the counterpart federal regulation contained in 29CFR 1926.910(b) requires a 15-minute wait prior to re-entry in tunnel operations. Therefore, this proposal is necessary to be at least as effective as the federal counterpart regulation. This proposed transfer will ensure that, with the explosive reorganization, employees/persons are prevented from entering an area and being overcome by the hazardous by-products of an explosion.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5291.)**

Section 5292. Secondary Blasting.

Subsection (a).

Existing subsection (a) prohibits activity of any kind that could cause the premature detonation of explosives that have been placed or are being placed for secondary blasting.

It is proposed in subsection (a) to substitute the term "explosive materials" in place of the word "explosives" to reflect language current used by the industry.

Section 5293. Misfires.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (b).

Existing subsection (b) requires that in the case of a misfire, the shot area will be made safe under competent supervision by one of the methods listed in the regulation. Either a 30 or 60-minute wait is required depending whether it was electric blasting or fuse cap blasting, respectively.

It is proposed to revise subsection (b) to include the phrase “or non-electric shock tube” in front of the word “blasting” to require the employer/blaster using non-electric shock tube blasting to wait 30 minutes before entering a blast area should a misfire occur. This proposal is necessary to recognize new technologies associated with blasting/explosive technologies. Non-electric shock tube is a recently developed method for the detonation of explosive materials.

Subsection (b)(4)(B).

Existing subsection (b)(4)(B) requires a substantial concrete cap capable of containing the explosion be placed above the explosive material at least 3 feet below the ground surface, or other permanent protection be installed. This provision follows concurrence by the Division that retrieval of explosive materials in a misfired geographical operation is unsafe.

It is proposed to revise subsection (b)(4)(B) to include the letter “s” after the term “explosive material” to be consistent with language currently used by the industry.

New Subsection (c).

New subsection (c) is proposed that requires the employer/blaster to clear that portion of the blast area of all persons where it is suspected that explosive materials are burning in a bore/shot hole. In no case shall anyone be permitted back into the area for at least one hour.

Proposed subsection (c) is necessary to ensure that employees are kept at a safe distance and timeframe to prevent injury or death as a result of explosive materials exploding/burning in a bore/shot hole. These requirements are also contained in existing Section 7237(e) of the MSO and existing Section 8542(e) of the TSO and are proposed for transfer into the GISO, as a result of the proposed reorganization of the explosive safety orders.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5293.)**

Section 5295. Use of Safety Fuse--General.

## Initial Statement of Reasons Explosives Reorganization

Existing Section 5295 contains requirements relating to safety fuse used for fuse cap blasting, determining the burning rate of the safety fuse, posting of notices, and prohibiting the use of damaged safety fuses.

### Subsection (b).

Existing subsection (b) contains requirements that determine the burning rate of the safety fuse.

It is proposed to revise subsection (b) to add the term "per foot" after "burning rate". This proposal is necessary to clearly indicate the required increment for test burning. In addition, it is proposed to indicate that "three" tests are required to determine the average burning rate. This proposal is necessary because misjudgment of the burning rate is the major cause of blasting accidents using safety fuse. The requirement to test "three" times can produce a more reliable burning rate. The inclusion of the phrase "at or near the blast area" after the term "open air" is necessary to ensure the test accurately reflects the conditions in which the fuse is to be used. The substitution of the phrase "manufacturer's stated burning range" in place of the phrase "average burning rate" is necessary to recognize the base rate to which the fuse is to be tested, rather than the vague 10% of the "average". There could be a differential of greater than 10% within the three tests used to determine the average burn rate.

### Subsection (c).

Existing subsection (c) states where the notice showing the burning rate of the safety fuse is to be displayed prominently.

It is proposed to editorially revise subsection (c) to substitute the word "conspicuously" in place of the word "prominently" to incorporate terminology commonly used in Title 8.

### Subsection (d).

Existing subsection (d) states that it is forbidden to use safety fuse that has been hammered or damaged.

It is proposed to editorially revise subsection (d) to state "Damaged safety fuse shall not be used." This proposal is necessary to eliminate unnecessary words and to clarify the intent of the regulation.

This proposed language is currently contained in existing Section 1571(g) of the CSO that is proposed for deletion to eliminate duplicative language and to consolidate the explosive safety orders into the GISO.

### New Subsection (e).

Initial Statement of Reasons  
Explosives Reorganization

A new subsection (e) is proposed which requires the employer/user to retest previously used rolls of safety fuse if they have not been fully used and were placed in storage after the initial testing and use.

New subsection (e) is necessary to address the probability that a roll of safety fuse will not be completely used during a blasting operation and will be stored for later use. Because of the effects of the environment on the safety fuse and to ensure the fuse is still safe for use, the advisory committee determined that the same test required for a new roll should be performed on the stored roll when taken from storage for use.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5295.)**

Section 5296. Safety Fuse Storage.

Subsection (b).

Existing subsection (b) prohibits the storage of safety fuse used underground unless it is dry and the relative humidity of the air is less than 80%.

It is proposed to revise subsection (b) to include a reference to igniter cord, which is similar in shape and construction as a safety fuse, and therefore, is subject to similar hazards and should be stored the same as a safety fuse. Also, it is proposed to delete the reference to “underground unless the storage”, as the 80 percent humidity maximum will dictate the storage requirements. It is also proposed to add the requirement that the safety fuse be stored in a cool and oil/grease free environment. Both a high humidity atmosphere and possible contamination of the fuse and/or igniter cord with oil can seriously affect the burning rate and dependability of the safety fuse and igniter cord. In addition, editorial revisions are proposed to subsection (b) to clarify the intent of the proposed revisions to the regulation.

These requirements are also contained in existing Section 7242(d) of the MSO and existing Section 8545(d) of the TSO and are proposed for transfer into the GISO, as a result of the proposed reorganization of the explosive safety orders.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5296.)**

Section 5297. Making Capped Fuses and Primers.

Subsection (c).

Existing subsection (c) permits only ring type-crimpers of standard design be used for attaching catching blasting caps to safety fuses. Also, this regulation describes crimpers that are not permitted and that the employer is to furnish a suitable crimper that is kept in an accessible place ready for use.

Initial Statement of Reasons  
Explosives Reorganization

It is proposed to revise subsection (c) to include the term “cap” before the term “crimper” to clarify the type of crimp to be used.

Similar language is currently contained in existing Section 1571(e) of the CSO, existing Section 7243(c) of the MSO, and existing Section 8546(c) of the TSO that is proposed for deletion to eliminate duplicative language and to consolidate the explosive safety orders into the GISO.

New Subsection (d).

New subsection (d) requires the employer to ensure that fuse ends are cut squarely with a sharp cutting blade, the capping operation is performed in a safe, dry area, and no smoking signs are conspicuously posted.

Proposed new subsection (d) is necessary to ensure that fuse ends are cut square with a sharp cutting blade. Also, the proposed requirement is necessary to ensure the procedure is done at a safe, dry location and posted that no smoking is allowed in the area.

The provisions of proposed subsection (d) are currently located in existing Section 1571(d) and (h) of the CSO, existing Section 7243(f) of the MSO, and existing Section 8546(f) of the TSO, which are proposed for repeal, as the result of the proposed reorganization of the explosive safety orders.

Subsection (e).

Existing subsection (e), proposed subsection (f), forbids attaching capped fuse to the cartridge by using a half hitch tied knot. In addition, this regulation recommends that the string tied method or other equally effective means be used.

It is proposed to editorially revise subsection (f) to delete the phrase “It is forbidden to use methods of attaching the”, to include the letter “A” prior to the word “capped”, to include the phrase “shall not be attached” following the word “fuse”, to include the word “by” following the word “cartridge”, to delete the phrase “which involved” prior to the term “half-hitching”, to remove the “ing” in the word “hitching”, and to delete the phrase “the capped fuse around the primer cartridge. This proposal is proposed to specifically state that a half-hitch is not to be used. In addition, it is proposed to delete the recommendation in subsection (f) that string-tied or other equally effective means be used.

This proposal is necessary to format this regulation to be consistent with Title 8 format and to delete unnecessary and/or unenforceable language. This proposal clarifies the intent of the regulation.

New Subsection (g).

## Initial Statement of Reasons Explosives Reorganization

A new subsection (g) is proposed. The language following the two sketches (string tied primer and laced primer) for recommended methods of attaching capped fuse to primer cartridge is proposed to be transferred as new subsection (g). This proposal is necessary to clearly indicate the accepted method for lacing safety fuse to explosive materials and to ensure the safety fuse is not kinked when using the lacing method. In addition, an editorial revision is proposed to substitute the word “shall” in place of the word “must” to be consistent with existing Title 8 format.

In addition to two sketches (string tied primer and laced primer), a third sketch (taped primer) is proposed to show a "taped" method for attaching safety fuse to a blasting cap. This proposed illustration shows a taping method and is necessary to eliminate the perception that the only two methods for attaching capped fuse to primer cartridge are the string and lacing method. These three illustrations (string tied primer, laced primer, and taped primer) are examples of accepted methods of attaching capped fuse to primer cartridge currently used in the industry.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5297.)**

### Section 5298. Blasting With Safety Fuse.

The title to Section 5298 addresses blasting with safety fuse.

It is proposed to revise the title of Section 5298 to read “Non-Electric Blasting Systems” to address non-electric blasting systems. This proposal permits the inclusion of shock tube initiation systems in this regulation.

The proposed revision to the title of Section 5298 is necessary to clearly indicate the regulations are addressing non-electric blasting systems. Safety fuse is a type of non-electric blasting. A second method of non-electric explosive initiation, “shock tube initiation,” has been developed and is being used.

### Subsection (a).

A revision is proposed to include a title to subsection (a), Safety Fuse Initiation System, to clearly indicate which non-electric blasting system the following regulations apply to. This proposal is necessary to delineate the application of the regulations as the proposed revisions to proposed Section 5298 addresses two types of initiating systems. As a result of this proposal, the remaining subsections are proposed for renumbering.

Existing subsection (a), proposed subsection (a)(1), prohibits igniting safety fuse until the explosive charge(s) is in place.

It is proposed to revise subsection (a)(1) to indicate that avalanche blasting is exempt from this prohibition as permitted by Article 121. The proposed addition of this “EXCEPTION” to permit the lighting of a safety fuse before the charge is in place for

## Initial Statement of Reasons Explosives Reorganization

avalanche blasting is necessary to recognize and permit an accepted method/procedure in the avalanche blasting industry. In addition, this proposal is necessary to eliminate any confusion that might result if a person is not familiar with the requirements contained in Article 121 that addresses avalanche blasting in depth.

### Subsection (c).

Existing subsection (c), proposed subsection (a)(3), prohibits the use of safety fuses when there is no safety shelter and there is a hazard to employees from flying rocks.

It is proposed to revise subsection (a)(3) to include examples of areas that would be affected by this requirement, to include the phrase “adequate nearby” before the word “shelter”, and to include the blast concussion as a source of employee hazard. This proposal is necessary to indicate the areas where the lack of adequate shelter would create the greatest hazard because of the confined areas that would be encountered. For this reason, the advisory committee recommended the phrase "such as a shaft, raise or winz" be specified in the regulation. Also, it proposed to include the phrase “adequate nearby” before the word “shelter” to clarify the intent of the regulation. In addition, the advisory committee recognized that the "blast effect" can be just as hazardous as being struck by flying debris. For this reason, the advisory committee considered it necessary to include "concussion" as a hazard to be guarded against.

In addition, it is proposed to transfer the intent of the provisions of existing Section 5299(j) into proposed subsection (a)(3) that prohibits the use of safety fuses under certain circumstances to provide safety for employee from flying rock and concussion. This proposal is necessary as it relocates these provisions into a more appropriate section in the GISO.

### Subsection (d).

Existing subsection (d), proposed subsection (a)(4), requires that all safety fuses be long enough to extend beyond the collar of the hole, and in no case will the fuse be less than three feet long.

It is proposed to revise subsection (a)(4) to include the informational “NOTE” currently contained in the existing “Note” to Section 7244(c) of the MSO and in the existing “NOTE” to Section 8547(c) of the TSO. As a result of the proposed repeal of the explosive regulations in the Mine Safety Orders and the Tunnel Safety Orders, the advisory committee recommended that proposed subsection (a)(4) be revised to include the “NOTE” that states "At the usual rate of burning, a 3-foot length of safety fuse will fire a shot in about 2 minutes." This information is necessary to understand commercial safety fuse burning rate.

### Subsection (h).

## Initial Statement of Reasons Explosives Reorganization

Existing subsection (h), proposed subsection (a)(8), prohibits person to enter the blast area until after a period of time equal to 2 minutes for each foot in the length of the longest fuse in the round or 15 minutes, whichever is the longest time, if more than 3 safety fuses are lighted at one time.

It is proposed to revise subsection (a)(8) to include the phrase “be permitted to” following the phrase “no person shall”. This proposal is editorial in nature and is necessary to clarify the intent of the regulation.

### Subsection (i).

Existing subsection (i), proposed subsection (a)(9), requires at least two employees be present when lighting fuses. An “EXCEPTION” is permitted when avalanche blasting is taking place.

It is proposed to revise subsection (a)(9) to repeal unnecessary language from the “EXCEPTION”. The repeal of the explanation as to why it may not be permissible to have another person present during avalanche blasting is redundant and therefore, this language is unnecessary.

### New Subsection (b).

New subsection (b) is proposed to address shock tube initiation systems. New subsection (b) is necessary to provide minimum safeguards when the employer elects to use the shock tube initiation method to detonate explosive materials.

New subsection (b)(1) requires the employer/user to ensure the initiation devices are secured to provide uninterrupted propagation. New subsection (b)(1) is necessary to ensure connections provide uninterrupted propagation, otherwise misfires could occur, creating a hazardous condition for the blaster and crew to contend with.

New subsection (b)(2) requires the use of factory made units as assembled, permitting a single splice on the lead-in trunkline. New subsection (b)(2) is necessary to ensure that factory-made units are used as assembled by the manufacturer because any modifications could result in altering the anticipated propagation. Again, this would put the blaster and crew in jeopardy should delayed fire or a misfire occur.

New subsection (b)(3) prohibits making connections between blast holes until immediately prior to clearing the blast site when surface detonators are used. New subsection (b)(3) is necessary to ensure all exposed personnel are out of the danger area should a premature activation of the blasting circuit occur while connection the surface delay detonators.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5298.)**



Initial Statement of Reasons  
Explosives Reorganization

New Section 5298.1. Use of Detonating Cord.

A new Section 5298.1 is proposed to address the care and use of detonating cord.

The provisions of proposed Section 5298.1 are currently contained in Section 1571.1 of the CSO, which are proposed for repeal, as the result of the proposed reorganization of the explosive safety orders.

Proposed new Section 5298.1 is necessary as the General Industry Safety Orders currently do not have regulations addressing the requirements for the use of detonating cord. In addition, this proposal is necessary as the provisions of existing Section 1571.1 of the CSO are virtually identical to 29CFR 1926.908. These regulations were adopted as the result of Federal OSHA's concerns that California's regulations were not "at least as effective as." This rulemaking action was approved by Region IX of Federal OSHA and the Office of Administrative Law in 1997.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5298.1.)**

Section 5299. Firing with Electricity-General.

New Subsection (a)

New subsection (a) is proposed to require that the employer/blaster survey the blast area for extraneous currents over 0.05 amperes that could affect the safety of the blasting operations and employees.

In addition, an "EXCEPTION" is proposed to new subsection (a) that permits the use of specialty electric blasting caps that require a higher amperage to be hazardous provided they are used as recommended by the manufacturer.

Proposed new subsection (a) is necessary to indicate that a survey to determine if the extraneous currents exist is to be made before the type of electrical firing system is decided upon to address the hazards of stray or extraneous currents within the blast site before adopting a system of electrical initiation blasting systems.

The provisions of proposed subsection (a) are currently contained in existing Section 1573(h) of the CSO, existing Section 7250(a) of the MSO, and existing Section 8548(a) of the TSO, which are proposed for transfer to the GISO, as the result of the proposed reorganization of the explosive safety orders.

Included in this proposal are proposed revisions to clearly indicate that no holes are to be loaded when the stray current exceeds 0.05 amperes.

This proposal is necessary as the 0.05 amperes is the manufacturer's standard that is currently used within the industry as the maximum acceptable ampere limit, with the

Initial Statement of Reasons  
Explosives Reorganization

noted “EXCEPTION”. There are specialty cap fuses that have a higher ampere rating that is noted by the manufacturer. For this reason, it is necessary to include an “EXCEPTION” for these devices provided they are used as recommended by the manufacturer.

Subsection (a).

Existing subsection (a), proposed subsection (b), is permissive to the extent that it permits electric firing to be done with blasting battery devices, blasting machines, light or power circuits or other means acceptable to the Division. Similar provisions are contained in existing Section 1573(a) of the CSO and Section 5314(b) that are proposed for repeal to eliminate duplicative regulations.

It is proposed to revise subsection (b) to delete the references to the specific types of detonating devices or other means accepted by the Division and require that electric firing be done only with devices designed for initiating electric detonators.

The proposed substitution of the mandatory word "shall" in place of the word "may" in subsection (b) is necessary to clearly indicate to the employer/user that the use of appropriate equipment is necessary. In addition, it is proposed to delete the references to specific types of detonating devices and to substitute performance language that states “only with devices designed for initiating electric detonators” to permit the employer/user to determine the appropriate device for the operation.

Subsection (b).

Existing subsection (b) prohibits the use of dry cell batteries when firing more than a single primer. Additionally, these dry cells batteries shall have no exposed terminals and storage and flashlight batteries shall not be used. Similar provisions regarding storage and flashlight batteries shall not be used as a source of electric current for blasting are contained in existing Section 1575 of the CSO that are proposed for repeal to eliminate duplicative regulations.

Existing subsection (b) is proposed for repeal as the proposed revisions to proposed subsection (b) address the concerns of the use of storage and dry cell batteries for sources of electric current for blasting and therefore, these provisions are unnecessary.

Subsection (c).

Existing subsection (c) requires the electrical connections on blasting machines or blasting battery devices be made in series or in a combination connection as recommended by the manufacturer. It also permits firing with light or power current when these connections are made in series or parallel or in a combination of series and parallel as shown on the accompanying diagrams. These provisions are currently contained in existing Section 7250(d) of the MSO and existing Section 8548(d) of the TSO that are proposed for repeal to eliminate duplicative regulations.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (c) to delete examples of the types of circuits that may be used and to replace these examples with a statement that the manufacturer's numbers and circuitry recommendations are to be used. This proposal is necessary to eliminate the possibility that an employer/user would consider using the listed examples when it was not recommended by the detonator manufacturer. These requirements are also contained in existing Section 1573(a) of the CSO and are proposed for transfer to proposed subsection (c), as result of the proposed reorganization of the explosive safety orders.

### Subsection (d).

Existing subsection (d) requires that ample power be used to fire all electric detonators. The voltage shall not exceed the voltages recommended by the manufacturers to prevent arcing and that a circuit interrupter be used when arcing is a problem.

Subsection (d) is proposed for revision to delete the phrases "Ample power shall be used to fire all", "and starters in the circuit. The voltage", and "exceed voltages recommended by the manufacturers to prevent arcing." and replace these phrases with the phrase "Devices used for igniting electric detonators shall not cause arcing in the detonators." This proposal is necessary to delete redundant and unnecessary language and to replace this language with succinct language to clarify the intent of the regulation.

Also included in existing subsection (d) is a NOTE regarding detonators in series and the minimum required amperage for alternating current and series circuits. This NOTE is proposed for repeal as the proposed revisions to this section addresses the arcing concerns and therefore, is unnecessary.

The information regarding the specific ampere requirements contained in the NOTE to existing subsection (d) is currently contained in the NOTE to existing Section 7250(c) of the MSO and the NOTE to existing Section 8548(e) of the TSO that are proposed for repeal to eliminate duplicative regulations.

### Subsection (e)

Existing subsection (e) requires blasting wires be kept clear of electric lines and other conductive materials, except the earth itself.

It is proposed to revise subsection (e) to delete the phrases "well in the" and "except the earth itself" as these phrases are redundant and therefore, unnecessary.

### Subsection (g).

Existing subsection (g) requires that low-voltage electric power lines within 50 feet of loaded hole be de-energized where possible before an electric detonator or starter is brought into the area.

## Initial Statement of Reasons Explosives Reorganization

Subsection (g) is proposed for revision to substitute the phrase “the holes to be loaded” in place of the term “loaded holes” to clarify the original intent of the regulation. Also, it is proposed to substitute the word "practical" in place of the word "possible" to recognize that there may be times when it is possible but not because of topography, location, or purpose of the electrical lines to remove low-voltage power lines that are within 50 feet of blasting operations.

### Subsection (h).

Existing subsection (h) requires the blasting circuits be tested with a blasting galvanometer before firing a round.

It is proposed to revised subsection (h) to add the phrase "...or other device designed to test blasting circuits..." to acknowledge that there are other methods and devices that can determine the continuity of an electrical circuit.

### Subsection (j).

Existing subsection (j) requires electric detonation when driving or enlarging shafts, winzes, stations, raises, where protection is not provided, or any location where lack of adequate nearby shelter or the distance to travel to a place of safety is such that there is a hazard to employees from flying rock and concussion.

It is proposed to transfer the intent of the provisions of subsection (j) to proposed Section 5298(a)(3) that prohibits the use of safety fuses under certain circumstances to provide safety for employees from flying rock and concussion. This proposal is necessary to relocate these provisions to a more appropriate section in the GISO.

### New Subsection (j).

New subsection (j) is proposed that prohibits the use of different brands of electric detonators within the same firing round.

Proposed subsection (j) is necessary as it is common knowledge within the industry that each manufacturer may design different detonating initiating characteristics into their detonators. These differences could result in misfire or delayed detonation should the detonators be interconnected.

The provisions of proposed subsection (j) are also contained in existing Section 5278(u) that are proposed for transfer to proposed subsection (j) to relocate this provision to a more appropriate section in the GISO. In addition, similar provisions are currently contained in existing Section 1573(c) of the CSO, existing Section 7232(q) of the MSO, and existing Section 8537(p) of the TSO that are proposed for repeal to eliminate duplicative regulations throughout Title 8.

### New Subsection (k).

Initial Statement of Reasons  
Explosives Reorganization

New subsection (k) is proposed which requires the licensed blaster to maintain possession of the keys for the shot-firing and safety switches. Also, only the licensed blaster or blaster in training shall unlock and remain at the switch when repairs, extensions, or tests are being made on the blasting or shot firing lines. The licensed blaster or blaster in training shall remain at the switch until he or she can relock the switch(es) or designates that responsibility to someone who reports back to the licensed blaster with the keys when work is completed. There are to be no preparations made for loading or unloading until the switches are relocked and the keys back in the possession of the licensed blaster. The licensed blaster will give the keys to the licensed blaster on the following shift. A duplicate set of keys should be kept by the superintendent under lock and key in the office and there shall be no other set of keys fitting the switch locks on the job site.

Proposed subsection (k) is necessary to ensure the keys for the shot-firing and safety switches are properly maintained by the appropriate person. These requirements are currently located in Section 1573.1(d) of the CSO that are proposed for transfer to proposed subsection (k).

New Subsection (ℓ).

New subsection (ℓ) is proposed which requires the employer/licensed blaster to take measures to ensure that all mobile radio transmitters are de-energized and effectively locked when less than 100 feet from electric blasting caps that are not in their original shipping containers.

Proposed new subsection (ℓ) is necessary to make California's regulations "at least as effective as" the counterpart federal regulations as this requirement is verbatim to that contained in 29CFR 1926.900(k)(4), Blasting and the Use of Explosives.

Diagrams of EXAMPLES OF BLASTING CIRCUITS.

Included in existing Section 5299 are diagrams showing examples of blasting circuits. These diagrams are also currently contained in existing Section 7250 of the MSO and are proposed for repeal to eliminate duplicative regulations in Title 8.

It is proposed to editorially revise the three diagrams to include the heading "Electric Detonators" under the existing heading "EXAMPLES OF BLASTING CIRCUITS" and to substitute the term "electric detonator" in place of the term "shot." Where the diagrams show connecting wires connected to "shots", a revision is proposed to substitute the name of the device the wires are actually connected to and to specify the term "electric detonators". This proposal is necessary to clarify that the term "shot" is the final result of the preparation and installation of the components.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5299.)**

Initial Statement of Reasons  
Explosives Reorganization

Section 5300. Firing Switches.

Existing Section 5300 requires that firing switches conform to a series of minimum standards, such as they shall be externally operated, shall be double pole construction, shall be of adequate rating for the maximum voltage, and specifies requirements for switch fuse or breaker ratings and air gaps.

New Subsection (c).

New subsection (c) is proposed which requires the shot firing switch to be no less than 1,000 feet from the face of the tunnel when the tunnel length exceeds 1,000 feet.

Proposed subsection (c) is necessary to require that the blaster, by the placement of the firing switch, be at least 1,000 feet from the face of the tunnel. This provision is also contained in existing Section 8549(c) of the TSO that is proposed for transfer to proposed new subsection (c), as a result of the proposed reorganization of the explosive safety orders.

New Subsection (d).

New subsection (d) is proposed which requires that when the tunnel is less than 1,000 feet long, the firing switch will be placed outside the tunnel portal.

The substance of this proposed regulation is currently contained in existing Section 8549(c) of the TSO. However, existing Section 8549(c) recommends that the firing switch be placed at the portal. Proposed subsection (d) will require the switch to be outside the tunnel portal as recommended by the advisory committee.

This proposal is necessary to address the placement of the firing switch outside the portal when the tunnel is less than 1,000 feet in length to ensure the blaster is so located as not to be in danger from the resultant "concussion" from the explosion. It was the consensus of the advisory committee that the safest place for the blaster to be is outside the portal where there would be no blast effect.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5300.)**

Section 5302. Permanent and Temporary Leading Wires.

Subsection (d).

Existing subsection (d) requires that the leading wires have sufficient capacity to carry the firing current and in no case have a capacity less than No. 14 American Wire Gauge copper wire or No. 12 American Wire Gauge aluminum wire. However, No. 18 American Wire Gauge may be used for an electric blasting cap.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (d) to require the leading wires to have the capacity to carry the required firing current to the detonators. Specifically, it is proposed to delete the word “sufficient” and replace it with the word “the”; to include the word “required” before the phrase “firing current” and delete the word “and” after this phrase; and to include the phrase “to the detonators” immediately following to indicate the necessary firing current to be used. Also, it is proposed to revise the last part of the sentence by relocating the phrase “in no case” and to delete the word “have” and prefacing this phrase to begin a second sentence. In addition, it is proposed to include the phrase “be used” immediately following the phrase “No. 12 American Wire Gauge” and to substitute the word “one” in place of the word “an”.

This proposal is necessary to ensure the proper size wires, as recommended by the explosive manufacturer/provider, are used. In addition, editorial revisions are proposed to subsection (d) to clarify the intent of the regulation.

### Section 5304. Blasting Procedure with Power and Light Circuits.

#### Subsection (a).

Existing subsection (a) requires that the keys to the auxiliary switch and firing switch be under the control of the blaster placing the charges in the blast area.

It is proposed to repeal subsection (a) as proposed Section 5299(k) addresses the concerns regarding the control of the keys to the firing switches. Therefore, this proposal is necessary to eliminate duplicative requirements within the GISO.

#### Subsection (b).

Existing subsection (b), proposed subsection (a), requires that before connecting the leading wires to the leg wires, the blaster is to ensure the auxiliary switch or switches are locked in the "off" position and other steps taken to ensure a circuit cannot be inadvertently made.

It is proposed to revise subsection (a) to include the term “licensed blaster” in place of the word “blaster”. This proposal is necessary to be consistent with Labor Code, Section 6710 that requires blasting operations to be under the direct supervision of a licensed blaster and with the proposed revisions throughout Group 18.

#### New Subsection (b).

New subsection (b) is proposed that requires if the electrical circuit is made from a light or power source, the electrical connections shall be made within an approved weatherproof enclosure.

Proposed subsection (b) is necessary to ensure that when an electric circuit from a light or power source is used for firing shots, the electrical connections are to be made up in an

## Initial Statement of Reasons Explosives Reorganization

approved weatherproof enclosure. This proposed requirement is necessary to prevent the inadvertent shorting or grounding of the firing circuit. In addition, this provision is also contained in existing Section 1573.1(a) of the CSO that are proposed for transfer to proposed subsection (b), as a result of the proposed reorganization of the explosive safety orders.

### Subsection (c).

Existing subsection (c) requires that temporary leading wires be tested for the presence of stray electrical current before they are attached to the leg wires. In addition, existing subsection (c) recommends that test be made with an instrument designed for that purpose.

It is proposed to revised subsection (c) to delete the limiting term "Temporary" that describes leading wires as all circuits, regardless of being temporary or permanent, need to be tested for stray current which could result in an unwanted detonation when the connection is made to the leg wires. Also, it is proposed to include "connecting" wires as connecting wires also need to be tested for stray current.

In addition, it is proposed to make the recommendation that the stray current test be made with a device designed for the purpose a mandatory statement and to include the phrase "and approved" following the phrase "instrument designed". This proposal is necessary to ensure that a test for stray current is made and that only approved equipment designed for the designated task is used.

### Subsection (f).

Existing subsection (f) prohibits persons from entering an area where primary blasting has taken place for at least 15 minutes after the explosion.

It is proposed to transfer the provisions of subsection (f) to proposed Section 5291(k). This proposal is necessary to relocate the provisions of subsection (f) to a more appropriate section in the GISO, specifically under blasting operations.

### Subsection (g).

Existing subsection (g) requires that the leading wires be disconnected from the electrical source and the firing switch and auxiliary switch, or switches, be locked in the "off" position.

It is proposed to transfer the provisions of existing subsection (g) to proposed new subsection (f) and to include the provisions of existing Sections 1573.1(b) and 1573.1(b) of the CSO and existing Section 7254(g) of the MSO. This proposal is necessary to clarify the intent of the regulation and to consolidate similar existing provisions into one section, specifically Section 5304(f), in the GISO.



Initial Statement of Reasons  
Explosives Reorganization

New Subsection (f).

New subsection (f) is proposed that prohibits anyone to approach the blasted area after blasting until the blasting switch has been locked in the “off” or “open” position, the blasting switch attachment plug has been disconnected from the electrical source, and the blasting wires have been shorted together.

This proposal is necessary to ensure positive control of the blast area that supplies electricity to the blasting circuit and to eliminate accidental leakage of electricity into the blasting system that may contain misfired explosives. These provisions are also currently contained in existing Section 5304(g), existing Sections 1573.1(b) and 1578(b) of the CSO, and existing Section 7254(g) of the MSO and are proposed for transfer to new subsection (f), to consolidate similar existing provisions into one section in the GISO.

Subsection (h).

Existing subsection (h), proposed subsection (g), requires the blaster to wait at least 30 minutes prior to re-entering the blast area if a shot fails to fire or a misfire is suspected. The switch is to be placed in the locked position.

It is proposed to revise subsection (g) to specify the term “(misfire)” following the phrase “shot fails to fire” for clarity as the word “misfire” is another term for “shot fails to fire”. Also, it is proposed to include the term “licensed blaster” in place of the word “blaster”. This proposal is necessary to be consistent with Labor Code, Section 6710 that requires blasting operations to be under the direct supervision of a licensed blaster and with the proposed revisions throughout Group 18. In addition, revisions are proposed that are editorial in nature and are necessary to clarify the intent of the regulation.

New Subsections (h) and (i).

New subsections (h) and (i) are proposed that require only the crew necessary for the loading and connecting-up operation shall be at the face during the operation and that no unnecessary work shall be done at the face during or after loading before the shots are fired.

These proposals are necessary to limit the number of persons that may be at the face to only those necessary to accomplish the intended task and to ensure the lead wires are not connected to the shot firing line until all unnecessary personnel have cleared the area. These provisions are also currently contained in existing Section 8537(v) and (w) of the TSO, and are proposed for transfer to new subsections (h) and (i), respectively, as the result of the proposed reorganization of the explosive safety orders.

New Blasting Circuit Diagram.

A new blasting circuit diagram is proposed to be included showing a method for rigging a permanent blasting line.

Initial Statement of Reasons  
Explosives Reorganization

This proposal is necessary as this diagram is currently located in the construction safety orders, Appendix C, Plate C-27, and is proposed for transfer to the GISO, as the result of the proposed reorganization of the explosive safety orders.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5304.)**

Section 5305. Blasting with Batteries, Blasting Devices and Blasting Machines.

The existing title to Section 5305 indicates the regulation applies to blasting with batteries, blasting devices and blasting machines.

It is proposed to revise the title to Section 5305 to use the generic terms “Electric Blasting Devices and Electric Blasting Machines” in lieu of the existing title. The specific reference to “Blasting with Batteries” is proposed for deletion because a “battery” is a component of a blasting machine located inside the blasting machine supplying electric power. It is proposed to include the term “Electric” prior to the terms “Blasting Devices” and “Blasting Machines” because the provisions in Section 5305 pertain only to electrical blasting. This proposal is necessary to more accurately describe the provisions of this Section.

Subsection (a).

Existing subsection (a) requires that batteries for blasting and accessories be assembled in one unit. This unit shall be of a type acceptable to the Division and have no exposed live terminals. Additionally, existing subsection (a) contains a “NOTE” that states the Division may accept such battery blasting devices provided they have been approved by the U.S. Bureau of Mines, Institute of Makers of Explosives or other recognized institutions.

In conjunction with the proposed revisions to the title of Section 5305, it is proposed to repeal subsection (a) and the accompanying “NOTE” as these provisions contain requirements for batteries and therefore, are unnecessary.

Subsections (b), (c), and (d).

Existing subsections (b), (c), and (d), proposed subsections (a), (b), and (c), address who is in charge of the blasting devices and machines and the connecting and disconnecting of the lead wires.

It is proposed to revise subsections (a), (b), and (c) to delete the references to “batteries” and “blasting batteries”. These references are unnecessary as a battery is a source of electricity and the proposed revisions to this section and Section 5299 will reference electric blasting machines.

## Initial Statement of Reasons Explosives Reorganization

Additionally, the term "licensed blaster in-charge" is proposed to be substituted in place of the word "blaster" in subsections (a) and (c). This proposal is necessary to be consistent with the proposed revisions within Group 18 and Labor Code, Section 6710 that requires the blaster to be licensed at every place of employment where explosives are used.

### Section 5306. Electric Blasting in Proximity With Radio Transmitters.

#### Subsection (a).

Existing subsection (a) requires that a sign with specific sized lettering be posted stating that radio transmissions are prohibited in the blasting area and specifies when the sign shall be posted. In addition, a "NOTE" is provided referring to the U.S. Department of Transportation regulations for specific sign requirements. These provisions are currently contained in existing Section 1576(c) of the CSO (a portion of this regulation is proposed for transfer to subsection (a), existing Section 7256(a) of the MSO, and existing Section 8554(a) of the TSO that are proposed for repeal, as the result of the proposed reorganization of the explosive safety orders.

It is proposed to revise subsection (a) to specify that signs shall be posted to clarify the intent of the regulation and to incorporate the requirements for sign language, and where the signs are to be located from the electrical blasting operation.

This proposal is necessary to provide proper signage requirements when using electric-sensitive devices during loading and blasting operations. These proposed revisions are also contained in a portion of existing Section 1576(c) of the CSO that is proposed for transfer to existing subsection (a).

Further, this proposal is necessary to make California's regulation "at least as effective as" the federal counterpart regulation contained in 29CFR 1929.900(k)(3).

Further, it is proposed to revise the "NOTE" to subsection (a) to include a reference to the "State of California, Department of Transportation, Manual of Traffic Controls" in place of the existing reference to the "U.S. Department of Transportation regulations". This proposal is necessary as the State of California, Department of Transportation has immediate jurisdiction over the U.S. Department of Transportation regarding the signage requirements for the above-ground transportation of explosive materials.

#### Subsection (c).

Existing subsection (c) contains tables of recommended distances for commercial and citizen band radio transmitters and VHF/UHF television transmitters.

It is proposed to update the recommended tables of distances following existing subsection (c), Tables 1, 2, 3, and 4, and footnotes to the tables, where necessary, to reflect the latest industry recommended clearance distances for electric blasting

## Initial Statement of Reasons Explosives Reorganization

operations. The proposed revisions to these tables and the corresponding footnotes in the GISO are taken from the existing corresponding tables and footnotes in the CSO, PLATE B-15. The existing tables in the CSO were recently updated to be at least as effective as the federal counterpart requirements. Federal OSHA references the Institute of Makers of Explosives, Publication No. 20 in 29 CFR 1926.900(k)(5), which California has elected to reprint for the convenience of the users.

Following Tables 1-5, it is proposed to include the word "NOTE" to precede the title "Recommended Table of Distances" that contains a general statement for the purpose of the tables and how the tables were derived. The inclusion of the word "NOTE" clarifies the intent of this information. In addition, the existing language references a "commercial blaster". It is proposed to substitute the term "licensed blaster" in place of the term "commercial blaster". This proposal is necessary to be consistent with Labor Code, Section 7990 that requires blasting operations be under the direct supervision of a licensed blaster and also to be consistent with the proposed revisions throughout Group 18 regulations.

### New Subsection (d).

A new subsection (d) is proposed that will permit reduction in the table distances provided special precautions, acceptable to the Division, are taken.

This proposal is necessary to reflect that there may be circumstances requiring the use of distances that are less than the published distances, provided the precautions are acceptable to the Division.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5306.)**

### New Section 5307. Blasting in Excavation Work Under Compressed Air.

New Section 5307, Blasting in Excavation Work Under Compressed Air, is proposed that prohibits the storage of explosive materials in caissons; prohibit employees, with the exception of the licensed blaster, lock tender and powder crew, from being in the air lock when explosive materials are present; specifies when detonators and explosives may be taken into pressure working chambers; specifies the responsibilities of the licensed blaster; specifies the type of explosive materials to be used; and requires bonding and grounding at or near the portal of all metal pipes, tracks, air locks and steel tunnel lining, with a maximum allowable distance between cross-bonding points.

This proposal is necessary to ensure that California's regulations remain at least as effective as the federal counterpart regulations, 29 CFR 1926.913. The requirements of proposed Section 5307 are also contained in existing Section 1571.3 of the CSO that are proposed for transfer to the GISO, as the result of the proposed reorganization of the explosive safety orders. The requirements of existing Section 1571.3 was recently

Initial Statement of Reasons  
Explosives Reorganization

adopted into Title 8 incorporating the provisions of 29 CFR 1926.913 as the result of comments received from Federal OSHA.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5307.)**

New Section 5308. Underwater Blasting.

New Section 5308, Underwater Blasting, is proposed that requires the employer, when performing underwater blasting operations, to ensure that; loading tubes and casing are constructed of similar metals; only water-resistant blasting caps and detonators are used; loading is done through non-sparking metal loading tubes; no blasting when vessels are underway nearby or before moored vessels are warned; no blasting is done when persons are swimming or in the water; signals are agreed upon for verification of all clear conditions; blasting flags are displayed; the storage and handling of explosive materials aboard vessels is in accordance with the provisions outlined in this section; and, when one or more charge is placed underwater, a float device will be attached in such a manner as to be released when the charge is fired.

This proposal is necessary to ensure that California's regulations remain at least as effective as the federal counterpart regulations, 29 CFR 1926.912. The requirements of proposed Section 5308 are also contained in existing Section 1571.2 of the CSO that are proposed for transfer to the GISO, as the result of the proposed reorganization of the explosive safety orders. The requirements of existing Section 1571.2 was recently adopted into Title 8 incorporating the provisions of 29 CFR 1926.912 as the result of comments received from Federal OSHA.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5308.)**

Section 5312. Loading or Assembling of Industrial Explosives and Devices.

Existing Section 5312 addresses the loading or assembling of industrial explosives and devices.

It is proposed to revise the title to this section to include a reference to "and/or Propellant Devices". The existing regulations in this section only discuss projectile firing devices. Propellant devices are manufactured and used within different industries for various applications.

Subsection (a).

Existing subsection (a) requires that loading operations for projectile firing devices be isolated from other operations by a partition constructed of materials capable of withstanding the explosion of the device or carried on in a separate area at least a minimum distance from other work areas.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (a) to include for clarity the phrase "which would fire in other than a vertical plane" following the phrase "projectile firing devices". Also, it is proposed to make the regulation performance oriented by deleting the vague references to "at least" and "substantial" and the specification for the 8 foot high partition wall, leaving only the requirement that the partition be capable of withstanding the explosion should an incident occur. In addition, it is proposed to include the phrase "shall be" before the phrase "carried on in a separate area". This proposal is necessary to improve grammar syntax.

The proposed revision exempting vertically firing projectiles is necessary as partitions are only effective for horizontal firing devices. The proposed deletion of the vague references to the words "at least" and "substantial" and the deletion of a specific minimum height requirement are necessary to permit the manufacturer and/or employer to determine what size partition is necessary. There may be no need for an eight-foot high partition.

### New Subsection (b).

New subsection (b) is proposed to address those projectiles that fire only in the vertical direction. New subsection (b) requires loading operations of projectile firing devices that fire only in a vertical plane to be located in clearly delineated work areas.

This proposal is necessary to ensure that action is taken to delineate and place these operations in areas separate from other activities. This proposed requirement was the result of concerns expressed during the advisory committee meetings.

### Subsection (b).

Existing subsection (b), proposed subsection (c), requires that loading operations of other types of explosive actuated power devices should be conducted in clearly defined work areas separated from other work areas.

It is proposed to revise subsection (c) to include a reference to "and/or propellant" actuated-power device following the phrase "other types of explosive" to be consistent with the proposed revision to the title of this section. As stated above, the existing regulations in this section only discuss projectile firing devices. Propellant devices are manufactured and used within different industries for various applications.

### Subsection (c).

Existing subsection (c), proposed subsection (d), contains prohibitions on smoking within 25 feet of the loading area and requirements that electrical apparatus within the loading area conform to wiring requirements for Class II, Division 2, Hazardous Areas.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (d) to delete the prohibition that smoking, welding or open flames not be permitted within 25 feet of a loading area. This proposal is necessary to eliminate duplicative regulations as this provision is currently contained in existing Section 5246 that pertains to smoking and open flames.

### Subsection (e).

Existing subsection (e), proposed subsection (f), states combustible materials shall not be stored in the loading area.

It is proposed to revise subsection (f) to delete the reference to the word “Combustible” and to include the phrase “not necessary for the operation” following the word “Materials” to recognize only materials necessary for the operation are to be at the loading area. This proposal is necessary to eliminate the possibility of incompatible materials that could initiate an incident, endangering the loading crew.

### Subsection (g).

Existing subsection (g), proposed subsection (h), limits the amount of explosives in the loading area to that required for the day's loading operation and not to exceed 20 pounds of preformed explosives and/or one pound of loose powder.

It is proposed to revise subsection (h) to substitute the term "explosive materials" in place of the word "explosives" to reflect language currently used within the industry. In addition, it is proposed to revise subsection (h) to delete the specific weight limitations of explosives for daily operations, permitting the employer/user to retain the material needed for one day's loading operations, regardless of the amount. Continuous loading operations for projectiles may be in the thousands of pounds and the existing regulation severely limits the ability of certain companies to conduct business. Also, the proposed performance type standard will permit the employer/user to develop the procedures to safely conduct daily operations.

### Subsection (h).

Existing subsections (h), proposed subsection (i), contains requirements for the storing and disposition of waste, scrap and unused explosives and spilled explosives.

It is proposed to revise subsection (i) to substitute the term "explosive materials" in place of the word "explosives" to reflect language currently used within the industry; to delete the second reference to the word "shall" as this word is unnecessary; to substitute the term "Type 2 magazine" in place of the term for "Class II magazine" to be consistent with the current classifications for storage magazines; to remove the phrase “not in” and replace it with the phrase “located outside” to clarify the original intent of the regulation that one day’s accumulation of waste or scrap explosives stored in a Type 2 magazine be located outside the loading area; and to include a statement clarifying that waste, scrap or unused explosive materials may be taken to a site for destruction or desensitization upon

## Initial Statement of Reasons Explosives Reorganization

completion of the day's loading activities to recognize an alternative to the destruction of explosive materials.

### Subsection (ℓ).

Existing subsection (ℓ), proposed subsection (m), requires that explosives loading and storage areas be posted with a sign with minimum lettering sizes and legend.

It is proposed to revise subsection (m) to delete the reference to "and storage" areas as the reference to storage areas is unnecessary. The regulations for the storage of explosive materials are already covered in Article 114 entitled "Storage of Explosive Materials", specifically Section 5251. In addition, it is proposed to include a statement at the end of subsection (m) that requires the letters be made on a background of sharply contrasting color to clarify that the sign lettering is to be highlighted on a background of sharply contrasting color for easy visibility.

### Section 5313. Storage and Transportation of Industrial Explosives.

The existing Section 5313 is entitled "Storage and Transportation of Industrial Explosives".

A revision is proposed to the title of Section 5313 to substitute the term "Explosive Materials" in place of the word "Explosives" to be consistent with industry terminology.

### Subsection (a).

Existing subsection (a) requires that industrial explosive charges be transported as explosives.

It is proposed to revise subsection (a) to substitute the term "explosive materials" in place of the word "explosives" to be consistent with language used within the industry.

### Subsection (d).

Existing subsection (d) requires loaded power actuated devices to be stored in a manner that exposes workers to the least possible hazard. Following existing subsection (d) are three additional subsections, existing subsections (d)(1) – (d)(3), which either recommend or require specific devices to be stored in a specific manner.

A revision is proposed to subsection (d) to substitute the word "employees" in place of the word "workers" to be consistent with Title 8 terminology. In addition, a revision is proposed to include the phrase "as follows" at the end of the regulation to specifically indicate that the following subsections (d)(1) – (d)(3) are requirements for the storage of the referenced power actuated devices. This proposal will clearly indicate the minimum steps necessary for the storage of loaded explosive power-actuated devices.



Initial Statement of Reasons  
Explosives Reorganization

Subsection (d)(1).

Existing subsection (d)(1) permits the storage of jet charges on racks removed from the working area.

It is proposed to revise subsection (d)(1) to substitute the word “shall” in place of the word “may” to require the use of storage racks. In addition, it is proposed to revise subsection (d)(1) to substitute the phrase “in designated areas or as appropriate” in place of the phrase “remove from the working area” to permit the employer/user to determine an alternative location which will provide safety for the employees, but not necessarily having to remove the device from the working area.

Subsection (d)(2).

Existing subsection (d)(2) states that projectile-type devices should be stored in pits below ground level in an isolated part of a building at specific distances from work areas or surrounded by a barrier of a given structural strength. This subsection also states that the Division may approve other methods.

It is proposed to revise subsection (d)(2) to include the phrase “to be maintained in the horizontal position” following the phrase “Projectile-type devices” and to make the intent of the regulation mandatory by substituting the word “shall” in place of the word “should” to clearly indicate that horizontally stored projectile-type devices shall be maintained in pits, in open areas at least 25 feet from the building or within a barrier to contain or lessen the blast effect on the worksite/employees should a blast or an accident occur.

In addition, the exception statement that states the Division may approve other methods is proposed for repeal as it is vague regarding what other methods are permitted and therefore, unnecessary.

Subsection (d)(3).

Existing subsection (d)(3) states armed explosives devices must be stored in pits below ground level or in compartmented steel containers and other storage devices as approved by the Division.

It is proposed to revise subsection (d)(3) to substitute the word “shall” in place of the word “must” to maintain a format consistent with that which exists in Title 8. In addition, it is proposed to delete the need for the Division's approval and therefore, to delete the phrase “or other storage devices as approved by the Division”. This proposal is necessary to eliminate the need for the employer to consult or obtain the Division's approval of other storage devices as it is current industry practice to develop storage of armed explosive devices in pits below ground level or in compartmented steel containers only.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (e).

Existing subsection (e) contains specific requirements relating to the storage of explosive-actuated power device charges.

It is proposed to revise subsection (e) to substitute a reference to “subsection (d)(1)” in place of existing “(d-1)” to specify that (d)(1) is a reference to a subsection. In addition, it is proposed to substitute the reference to “Type 2” magazine in place of “second class” magazine to be consistent with terminology used in the industry and to reflect the proposed revisions made to the classification of storage facilities within the Group 18 regulations.

Subsection (e)(1).

Existing subsection (e)(1) states that the storage area within a building must be enclosed by walls of 1-hour fire resistant construction or the enclosure is protected by an automatic sprinkler system or the magazine is located within 10 feet of an exit.

The proposed revisions to subsection (e)(1), are editorial in nature, as these proposed revisions substitutes the word “the” in place of the word “a”, corrects the misspelling of the word "enclosed", spells out the numerical "one", and relocates the word "fire" to precede the word “resistant” for clarity.

Subsection (e)(2).

Existing subsection (e)(2) prohibits sources of ignition or combustible material within 25 feet of the magazine.

This subsection is proposed for repeal as it is inconsistent with the more stringent 50 foot requirements contained in Sections 5246, 5251(e), and 5256(b) in addition to requirements within Group 18. This proposal is necessary as it was stated during the advisory committee that it is common practice to maintain at least 50 feet of clearance of combustible materials from the magazine.

Subsection (e)(5).

Existing subsection (e)(5) requires that magazines are to be kept locked except when inserting or removing explosives.

This subsection is proposed for repeal as its requirements regarding the locking of explosive material magazines are contained within the storage of explosive materials, specifically proposed Section 5251(j). This proposal is necessary to eliminate duplicative requirements within the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5313.)**

Initial Statement of Reasons  
Explosives Reorganization

Section 5314. Firing with Electricity--Well Site.

Subsection (a).

Existing subsection (a) requires that no electric firing or preparation for electric firing be knowingly done when stray electrical current sufficient enough to detonate electric blasting cap are known to exist at the well site.

It is proposed to revise subsection (a) to require the licensed blaster to conduct a survey for extraneous and dangerous currents before implementing any system of electrical firing, and to eliminate all dangerous currents before loading is accomplished. This proposal is necessary to clarify the intent of the regulation as the existing wording in existing subsection (a) that states "knowingly be done" does not convey the intent that a survey is to be made. This proposed action to require the licensed blaster to survey the area for extraneous current is necessary to ensure there is no source of ignition present before preparing for electric initiated blasting.

Subsection (b).

Existing subsection (b) permits electric firing with blasting battery devices or means acceptable to the Division.

This subsection is proposed for repeal, as it is permissive and therefore, unenforceable. Similar provisions of existing subsection (b) are contained in existing Section 1573(a) of the CSO that is proposed for repeal and Section 5299(b) that is proposed for revisions to require that electrical firing be done only with devices designed for initiating electric detonators.

Subsection (c).

Existing subsection (c), proposed subsection (b), requires that the firing circuit be shorted following testing and remain shorted until the explosive device is lowered below the surface of the well.

It is proposed to revise subsection (b) to include the modifier "effectively" before the word "shorted" to emphasize to the employer/licensed blaster the importance of the firing circuit being shorted until the explosive device has been lowered below the surface of the well. This proposal is necessary as a blast or incident could occur if stray or unwanted current leaked through the "shorted" location.

Subsection (e).

Existing subsection (e), proposed subsection (d), requires warning signs to be posted at all routes of access with specific wording and lettering size required.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (d) to substitute the phrase “entrances to the well site” in place of the phrase "routes of access". This proposal is necessary to eliminate any confusion regarding where on the “route of access” the warning sign is to be placed. In addition, this proposal permits the licensed blaster/employer to place the warning signs at or near the entrances to the well site in lieu of placing signs at every location that could eventually lead to the area of concern.

### Subsection (f).

Existing subsection (f), proposed subsection (e), requires that perforating operations conducted where there are television, radio or radar transmitters are at distances from those facilities as shown in 5306, unless special precautions acceptable to the Division "is" taken.

It is proposed to revise subsection (e) to insert the word “Section” before the set of numbers “5306” to be consistent with Title 8 format and to substitute the word “are” in place of the word “is” to correct syntax.

### New Subsection (f).

New subsection (f), as proposed by the advisory committee, prohibits the entry of employees into a "cellar" after blasting (well perforation) until it has been ascertained that hazardous/toxic vapors/fumes, dust and gasses have been reduced to safe limits.

New subsection (f) is necessary to require that no employee shall enter a well cellar after blasting has occurred until any toxic vapors/fumes have been reduced to safe limits. This proposal will prevent employees from being exposed to potentially a hazardous air environment.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5314.)**

## **Article 119. Manufacture of Explosives Materials.**

The title of existing Article 119 is entitled “Manufacturing of Explosive Materials”.

A revision is proposed to the title of Article 119 to indicate that the processing of explosive materials is included in this Article. Therefore, a new title for Article 119 is proposed entitled “Manufacturing and Processing of Explosive Materials”. This proposed revision is necessary to address a previously unknown hazard that manifested itself at an explosives repackaging site. The Division has requested regulations be developed to mitigate the reoccurrence of a similar incident which resulted in several employee injuries and fatalities.

### Section 5319. Scope.

## Initial Statement of Reasons Explosives Reorganization

Existing Section 5319 contains the scope statement for Article 119. These requirements apply to the manufacture and handling of explosives, blasting agents, ammunition and pyrotechnics upon the manufacturing site.

A revision is proposed to the preamble statement in Section 5319 to include "processing" in the functions for which this Article will apply. This proposal clarifies the original intent of the regulation. This proposed revision is necessary to address a previously unknown hazard that manifested itself at an explosives repackaging site. The Division has requested regulations be developed to mitigate the reoccurrence of a similar incident which resulted in several employee injuries and fatalities.

### New Subsection (d).

New subsection (d) is proposed to clearly define what the term "processing" is meant to encompass.

This proposal is necessary to ensure that when packing or repacking explosive materials for wholesale distribution, the appropriate safeguards are taken as delineated in Article 119 to prevent an unwanted incident that could result in a catastrophic explosion or fire.

### Subsection (d).

This provisions of existing subsection (d) that states the disposal of all waste explosive materials resulting from the manufacturing process shall apply to Article 119 is proposed to be renumbered as new subsection (e). This proposal is necessary as the result of the proposed inclusion of new subsection (d).

## Section 5320. Reporting Requirements.

### New Subsection (a).

It is proposed to reformat Section 5320 to be consistent with the format of Title 8. Therefore, the first paragraph of Section 5320 has been renumbered as new subsection (a) that requires employers manufacturing explosives, ammunition blasting agents, or fireworks to furnish to the Division information regarding manufacturing locations, types of explosives being manufactured, names and addresses of controlling persons, and a map showing those buildings containing more than one pound of explosives.

It is proposed to revise new subsection (a) to substitute the term "explosive materials" in place of the word "explosives" to be consistent with industry terminology, to eliminate unnecessary references to specific explosive materials as a consequence of incorporating the term "explosive materials", and to eliminate the parenthetical phrase "(within the scope defined in Section 5310)" as this reference is unnecessary.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise new subsection (a) to require that the reporting information be made available upon request by the Division in lieu of the requirement that the information be furnished to the Division. This proposal is necessary to eliminate the need for the owner/corporation to update and submit information to the Division on a continuous basis. This proposal relieves the employer of the burdensome task of continuously supplying the Division with the listed information as required in proposed Section 5320 and also eliminates the ongoing storage and maintenance by the Division of the reporting information provided by the employer.

### Subsection (b).

Existing subsection (b), proposed subsection (a)(2), states what types of explosive materials are to be included in the reporting requirements required by the Division.

It is proposed to revise subsection (a)(2) to substitute the term "pyrotechnics" in place of the word "fireworks" to reflect terminology commonly used within the explosives industry.

### Subsection (e).

Existing subsection (e) contains the statement that this Article is not to be construed as applying to or prohibiting a mixing of blasting agents such as NCN or AN-FO in the loading area provided all necessary safety precautions are taken.

It is proposed to revise subsection (e) to re-designate this regulation as an "EXCEPTION" as on-site mixing of binary components or blasting agents such as ANFO is exempt from Article 119 only if all necessary safety precautions are taken. Mixing binary components or blasting agents such as ANFO on-site is a simple mixing operation involving the mixed product to be immediately loaded into the hole. This process does not have the hazards involved as in fixed manufacturing operations. This proposal is necessary to clarify the original intent of this regulation.

It is proposed to include the term "binary components", to delete the reference to "NCN" which is another form of ANFO, and to eliminate the hyphen in the term "AN-FO" to be consistent with how this term is identified in the GISO. This proposal is necessary to clarify that blasting agents are composed of "binary components" and can be mixed at the job site.

### Section 5321. Plans of Plant.

Existing Section 5321 requires that a copy of the plans of the plant be kept in the office on the premises of each explosives, ammunition, blasting agent, or fireworks manufacturing plant, and to be made available to the Division or its authorized representative upon request. Included in this regulation are references to Title 24 and Title 8, Section 5321.

## Initial Statement of Reasons Explosives Reorganization

In addition to editorial revisions, it is proposed to revise Section 5321 to include a reference to “pyrotechnics processing facilities” following the phrase “blasting agents”. The proposed revision to include “pyrotechnics processing facilities” will require secondary market facilities, such as repackaging operations, to maintain plant and operations plans available for review by the Division. This proposal is necessary to be consistent with the revisions proposed throughout Article 119, Manufacturing and Processing of Explosive Materials.

It is proposed to revise Section 5321 to delete the term “fireworks” as the term “pyrotechnics” is the more appropriate terminology used in the explosives industry. This proposal is necessary to be consistent with terminology commonly used in the explosives industry.

It is proposed to revise Section 5321 to delete the reference to the authorized representative as the reference to the Division is accepted to include the representative of the Division and therefore, this reference is unnecessary. This proposal eliminates unnecessary language in the regulation. In addition, it is proposed to delete the references to Title 24 and Title 8, Section 5321 as the provisions of Section 5321 apply to administrative procedures and not building structure. Therefore, these references are unnecessary.

### Section 5322. Training.

The title of existing Section 5322 is entitled “Training”.

The title to Section 5322 is proposed for revision to include the term "and Instruction" to be consistent with the contents of the regulations.

Existing Section 5322 requires that workmen who handle explosives be instructed in the hazards of the materials, the processes in which they are engaged, and the safety rules.

It is proposed to revise Section 5322 to delete a specific gender reference, to substitute the term "explosive materials" in place of the word "explosives" to be consistent with industry terminology, and to delete the phrase "or explosive charges" as unnecessary language.

### Section 5323. Emergency Procedure.

Existing Section 5323 requires that emergency procedures be formulated for each plant and that they include personal instruction in any emergency that may be anticipated. This section also requires that all personnel be made aware of emergency warning signals and evacuation procedures.

It is proposed to repeal Section 5323 as its requirements regarding the development and implementation of an emergency action plan duplicate the requirements contained in the

Initial Statement of Reasons  
Explosives Reorganization

GISO, Sections 3220, Emergency Action Plan, and similar requirements in proposed Section 5320(a)(5).

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5323.)**

Section 5324. Change Rooms.

Existing Section 5324 is permissive to the extent that the Division may require change rooms equipped with locker space for street clothing and personal effects. Included in this regulation are references to Title 24 and Title 8, Section 5324.

It is proposed to revise the existing title of Section 5324 to include the words “and Washing Facilities” to read “Change Rooms and Washing Facilities”. This proposal is necessary to identify in the title of this section that these regulations pertain to both change room and washing facilities.

It is proposed to revise Section 5324 as the existing language in this section is permissive and ambiguous. The phrase “The Division may require” is proposed for repeal and replaced with the phrase “Whenever employees are required to change from street clothes into protective clothing”. The existing reference to the phrase “Division may require” is proposed for repeal as this language is permissive and ambiguous. The proposed language is necessary to provide a clearer understanding of when the employers are required to provide change rooms and washing facilities. The phrase “shall be provided” is proposed to be included following the words “change rooms”. These revisions are proposed to be consistent with the existing requirements in Article 9, Sanitation, specifically Section 3367, Change Rooms.

It is proposed to substitute the word “employees” in place of the word “workmen”. This proposal is necessary to eliminate specific gender references.

It is proposed to substitute the word “shall” in place of the word “may” following the words “hot and cold running water” to remove the permissive nature of the existing language. This revision is proposed to be consistent with the existing requirements in Article 9, Sanitation, specifically Section 3366, Washing Facilities.

In addition, it is proposed to delete the references to Title 8 and Title 24, Section 5324 as these references are not necessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5324.)**

Section 5325. Food.

Existing Section 5325 prohibits workmen to eat at places where explosives or pyrotechnics are present.



Initial Statement of Reasons  
Explosives Reorganization

It is proposed to substitute the word “employees” in place of the word “workmen”. This proposal is necessary to eliminate specific gender references.

Section 5326. Intraline Distance.

Existing Section 5326 contains the definition for intraline distance and the purpose for this distance. It also states that buildings separated by intraline distances will probably suffer substantial structural damage. Included in this regulation are references to Title 24 and Title 8, Section 5326.

It is proposed to transfer the contents of Section 5326 to a more appropriate location in Section 5237, the “Definitions” section in the GISO that contains the industry specific definitions for Group 18, Explosive Materials. As a result of this proposal, it is proposed to delete the references to Title 8 and Title 24, Section 5326 as these references are not necessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5326.)**

Section 5327. Intraline Separation of Operating Buildings.

Subsection (a).

Existing subsection (a) requires that all mass detonating explosives, Class A explosives, and fireworks manufacturing buildings, where explosive charges are assembled, prepared or loaded, be separated from all other buildings and magazines within the confines of the manufacturing plant, using the barricaded tables. This subsection also contains a “NOTE” that recognizes the intraline distances of recognized authorities, such as the Department of Defense (DOD).

It is proposed to revise subsection (a) to delete the reference to "Class A" explosives as it is a redundant statement. Class A explosives are mass detonating explosives. In addition, it is proposed to revise subsection (a) to substitute the term “pyrotechnics” in place of the term “fireworks” to be consistent with the proposed revisions throughout this Article.

The NOTE to subsection (a) is proposed for revision to include references to tables published by the Bureau of Alcohol, Tobacco and Firearms (ATF). Because ATF is the lead federal agency for the enforcement of the explosive storage regulations, the advisory committee recommended that the ATF tables should be included as examples for intraline distances for those explosive materials that are not addressed by the tables within Group 18. This proposal is necessary to eliminate the possibility of imposing overly restrictive or conflicting requirements. For this reason, it is proposed to repeal the reference to Section 5253 as the distances mandated within Section 5253 could be different than those required by the referenced agencies and tables in this NOTE.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (b).

Existing subsection (b) requires that when a building or magazine contains explosives and is not barricaded, the intraline distances shown shall be doubled. Included in this regulation are references to Title 24, Title 8, Section 5327.

It is proposed to revise subsection (b) to include the phrase “in the following Table” following the phrase “not barricaded the intraline distances shown”. This proposal is necessary to clearly delineate between the DOD table and the table contained in this section. In addition, it is proposed to delete the references to Title 24 and Title 8, Section 5327 as these references are obsolete references and no longer applicable.

Existing Section 5327 contains the intraline distance table.

This table is proposed for repeal to be replaced with the latest industry and user table. The Institute of Makers of Explosives (IME) has revised the intraline distance table. The IME is the recognized authority for developing and compiling tables regarding safe storage and work distances by both Federal and State entities and is used by the affected industries. For this reason, it is proposed to adopt the new table to be consistent with other enforcement agencies and the regulated explosives industry.

Section 5328. Operation--Buildings and Equipment.

Subsection (a).

Existing subsection (a) requires operating buildings or rooms in which more than 50 pounds of explosive or fireworks are present at any time to be provided with a blow out or explosion-relief type wall. The wall should be placed to present the least hazard to workmen in adjacent buildings.

It is proposed to revise subsection (a) to substitute the term "explosive materials" in place of the term "explosives" to be consistent with industry terminology, to eliminate the unnecessary reference to "fireworks" as consequence of the proposed incorporation of the term "explosive materials", and to eliminate specific gender references.

In addition, revisions are proposed to indicate that these measures are necessary when the explosive materials are of the mass detonation type, to require the installation of an explosion pressure relief type roof, and to require the relief wall be placed in the direction where the least hazard exists for employees in adjacent buildings.

These proposed revisions are necessary to clearly specify that these measures are necessary when the explosive materials are the mass detonation type and to permit the use of the roof as a point of release for the pressure caused by an explosion. Also, the proposed insertion of the phrase "direction of the" before the term “relief wall”, the substitution of the word "shall" in place of the word “should”, and the relocation of the

## Initial Statement of Reasons Explosives Reorganization

word “placed” to follow the word “so” are necessary to indicate that not only is it necessary to provide a wall, the position of the wall must be so placed to provide the greatest protection for affected employees who are located in adjacent buildings.

### Subsection (b).

Existing subsection (b) requires that the explosives venting area will be calculated using a specific area to volume ratio.

It is proposed to revise subsection (b) to indicate that the venting is for explosion pressure relief. This proposal is necessary to clearly specify that it is the pressure from an explosion that is to be relieved. In addition, it is proposed to substitute the word “shall” in place of the word “will” to provide language that is consistent with the format of Title 8.

### Subsection (c).

Existing subsection (c) requires that there be adequate aisle space and at least two exits separated by a distance equal to at least one fifth the perimeter of the room. Additional openings and firewalls are to be equipped with approved self-closing fire doors with specific requirements for force/pressure required to open the doors.

Also included in subsection (c) is a “NOTE” that permits cubicles to have one exit within cubicles 100 square feet or less and where no more than two people are working within 12 feet from an unobstructed passageway.

It is proposed to repeal the provisions of subsection (c) and the accompanying “NOTE” as their contents are already addressed by local fire authorities through enforcement of the local fire codes and within Article 2, Standard Specifications, of the GISO. This proposal is necessary to eliminate duplicative fire/safety requirements contained in the GISO, Article 2, Standard Specification and fire/safety regulations that are already enforced by the local fire authorities.

### Subsection (d).

Existing subsection (d), proposed subsection (c), requires that floors, walls, interior surfaces, and equipment shall be of a finish and color that will indicate the presence of dust and spilled material and shall be of a smooth surface for easy cleaning.

It is proposed to revise subsection (c) to require that the floors and work surfaces be constructed to facilitate cleaning and to preclude, to the extent possible, cracks and crevices where explosive materials could lodge or accumulate. These proposed revisions are necessary to clearly indicate that floors and work surfaces are to be constructed to facilitate cleaning and to preclude, to the extent possible, cracks and crevices in which explosive materials can lodge or accumulate.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (e).

Existing subsection (e), proposed subsection (d), addresses the heating and cooling of buildings and states it is to be done by steam, water, or other indirect sources or electric heaters.

It is proposed to revise subsection (d) to delete the reference to the use of electric heaters as a source of heat as this type of heat source could also be an ignition source. This proposal is necessary to be consistent in prohibiting potential sources of ignition where explosive materials are handled or manufactured.

Subsection (f).

Existing subsection (f), proposed subsection (e), requires that electrical wiring and equipment be acceptable for the hazard involved and installed in accordance with the hazardous locations section of the Electrical Safety Orders.

It is proposed to revise subsection (e) to delete the phrase “acceptable for the hazard involved and installed” and the term “Hazardous Locations” as these concerns are already addressed within the referenced Electrical Safety Orders. Therefore, this proposal is necessary to eliminate unnecessary wording.

Subsection (g).

Existing subsection (g), proposed subsection (f), requires that effective bonding and grounding be provided to prevent the accumulation of static charges were static charges are a hazard.

It is proposed to revise subsection (f) to delete the modifier "effective" and the conditional phrase alluding to where static charges are a hazard. This proposal is necessary as these statements are redundant and therefore, are unnecessary. The Electrical Safety Orders require that bonding and grounding be accomplished to prevent static electricity under all circumstances within the explosive materials manufacturing industry.

Subsection (h).

Existing subsection (h), proposed subsection (g), requires that hydraulic or air presses be provided with pressure relief valves. This subsection also states that dies and plugged press equipment shall not be cleared by striking blows that may detonate or start the material burning.

It is proposed to revise subsection (g) to delete the term "air" and replace it with the more commonly used industry term "pneumatic". In addition, an “EXCEPTION” statement is proposed to permit clearing plugged dies or presses by striking the machinery when the employer/operator has made provisions to contain or to preclude fire or detonation. This

## Initial Statement of Reasons Explosives Reorganization

proposal is necessary as an extinguishing system may be available to prevent a conflagration or the device is guarded in such a manner that a detonation would not affect personnel within the area.

### Subsection (i).

Existing subsection (i), proposed subsection (h), prohibits explosive dust from being exhausted to the atmosphere. Where vacuum systems are used, a list of seven conditions to be complied with is listed.

It is proposed to revise subsection (h) to require the exhaust system to be designed by a qualified person, and installed and maintained in accordance with the hazards involved, incorporating the included list of seven conditions. This proposal is necessary to ensure the vacuum dust collection system is designed, installed, and maintained to mitigate the hazards that are expected to be encountered.

### Subsection (i)(1).

Existing subsection (i)(1), proposed subsection (h)(1), requires the use of filters between the source vacuum and the point of pick-up.

It is proposed to revise subsection (h)(1) to substitute the term "shall" in place of the term "must" to be consistent with Title 8 format and to substitute the term "explosive materials" in place of the word "explosives" to be consistent with industry terminology.

### Subsection (i)(2).

Existing subsection (i)(2), proposed subsection (h)(2), requires the explosive dust system to be designed to prevent pinch points, threaded fittings exposed to the hazardous dust and sharp turns, dead ends, pockets, etc., in which explosives may lodge and accumulate outside the collecting chamber.

It is proposed to revised subsection (h)(2) to substitute the phrase "explosive material dust collection system" in place of the phrase "explosive dust collection system" and to substitute the term "explosive materials" in place of the word "explosives" to be consistent with industry terminology.

### Subsection (i)(4).

Existing subsection (i)(4), proposed subsection (h)(4), requires that when a dust collector is used in the operating area, it will be provided with an adequate shield to protect personnel in the area.

It is proposed to revise subsection (h)(4) to substitute the phrase "dust is collected" in place of the phrase "dusts are collected" to specify the word "dust" in the singular form. In addition, it is proposed to include the word "protective" in place of the word

## Initial Statement of Reasons Explosives Reorganization

“adequate” and to relocate the word “adequate” following the word “shields” to clearly indicate the type of shield that is required/necessary. This proposal is necessary as it clarifies the intent of the regulation.

### Subsection (i)(5).

Existing subsection (i)(5), proposed subsection (h)(5), states that no more than 2 rooms may be serviced by a common connection to a vacuum collection chamber. Where interconnections are used, means should be employed to prevent propagation of an incident through the collection piping.

It is proposed to revise subsection (h)(5) to spell out the number "two" in place of the number “2”, to remove the permissive language “may” and replace it with the word “shall”, and to remove the word “should” and replace it with the word “shall. This proposal limits the common connections within the system to serving two rooms to prevent/limit the possibility of an incident. This proposal is necessary to ensure the potential for propagation and spreading of an unwanted incident is maintained at a minimum.

### Subsection (i)(6).

Existing subsection (i)(6), proposed subsection (h)(6), requires a wet collector when collecting sensitive explosives and gives examples such as black powder or lead azide. It also requires that the wetting agents be compatible with the explosives.

It is proposed to revise subsection (h)(6) to delete unnecessary subjective phrase “the more” and to substitute the term "explosive materials" in place of the word "explosives" in the first and second sentences to be consistent with language commonly used within the explosives industry.

### Subsection (i)(7).

Existing subsection (i)(7), proposed subsection (h)(7), requires that explosives dusts be removed from collection chambers as often as necessary to prevent overloading and that the entire system be cleaned at a frequency that will eliminate hazardous concentrations of explosives dusts in pipes, tubing, and/or ducts.

It is proposed to revise subsection (h)(7) to substitute the term "explosive materials" wherever the word "explosives" appears in the regulation to be consistent with terminology commonly used within the explosives industry and to eliminate the plural form of the word “dusts” wherever it appears in the regulation to the singular form “dust”. In addition, it is proposed to revise subsection (h)(7) to include a provision that prohibits explosive materials being left in the chamber overnight. This proposal is necessary to ensure explosive dust is removed from the collection chamber after each day's use to ensure there is no additional “fuel” available should a fire or incident occur after working hours. Also, should an incident occur, and there is explosive materials left

## Initial Statement of Reasons Explosives Reorganization

in the chamber, this would be an unknown hazard confronting the emergency response personnel.

### Subsection (j).

Existing subsection (j), proposed subsection (i), states squirrel cage blowers should not be used for exhausting hazardous fumes, vapors, or gases. This subsection further states that nonferrous fan blades are permitted when they are located within the ductwork and the motor shall be located outside the duct.

It is proposed to revise subsection (i) to substitute the word “shall” in place of the word “should” and to substitute the phrase “shall be used” in place of the phrase “are permitted” to delete permissive language. This proposal prohibits the use of squirrel cage blowers for exhausting hazardous fumes, vapors or gases. Squirrel cage blowers are constructed in a manner that does not allow for easy access and cleaning of internal components. These components could become repositories for explosive materials that could result in a reaction with the material being vented/exhausted. Also, if an unrelated incident did occur, providing heat and a source of ignition, a violent reaction could result.

In addition, it is proposed to substitute the term “non-sparking” in place of the term “nonferrous” to clarify that fan blades are to be “non-sparking” as “nonferrous” materials can create a spark which could ignite residual materials, vapors, or fumes within the exhaust system.

### Subsection (k).

Existing subsection (k), proposed subsection (j), requires that work stations where less than one pound of explosives is used are to be separated by distance, barrier, or other means to prevent an explosion from being initiated from a fire/incident in an adjacent work station. When necessary, the operator of the station shall be protected with a personnel shield designed to withstand a blast from the maximum amount of explosives at the work station.

It is proposed to revise subsection (j) to substitute the term “explosive materials” wherever the word “explosives” appears in the regulation, to delete the non-quantifiable phrase “small amount” and the specific reference to the “less than one pound” exemption, to insert language referencing “initiation” following the word “fire”, and to substitute the word “initiate” in place of the word “ignite” to be consistent with terminology commonly used within the explosives industry. This proposal is necessary to indicate that steps or procedures are to be taken to prevent propagation of explosive materials, regardless of the quantities. Also, it is proposed to substitute the term “protective” in place of the term “personnel” to clarify that the shield be a protective shield. In addition, it is proposed to delete the phrase “and its support shall be a tested design to” and to replace this phrase with the language “shall be designed to safely” as the “support” of the shield is integral to the shield.

Initial Statement of Reasons  
Explosives Reorganization

New Subsection (k).

A new subsection (k) is proposed which requires a prototype of the shield to be used to be tested and proven sufficient for the anticipated conditions prior to an operational model being placed in service.

This proposal is necessary as the specification requirement in existing subsection (k) is proposed for repeal and replaced by a performance standard.

Subsection (ℓ).

Existing subsection (ℓ) states that when shields or structures are needed to protect personnel, specific requirements are required depending on the amount of explosives that could become involved. Following subsection (ℓ) are specifications for building a structure or shield wall.

The proposed repeal of subsection (ℓ) and the accompanying specifications for building a structure or shield wall is necessary as the proposed revisions to subsection (j) and proposed new subsection (k) will address the design and construction of a shield or structure. Proposed new subsection (k) includes the testing of a prototype of the shield and proving that the design is sufficient for the anticipated conditions. These proposed performance requirements will replace the existing specification requirements contained in existing subsection (ℓ).

Subsection (m)

Existing subsection (m), proposed subsection (ℓ), requires that when the personal protective wall becomes so large because of the quantity of explosives involved that it is impractical, the operator must perform the operations using remote controls or be protected by a shelter designed with a safety factor of not less than 4. Included in this regulation are references to Title 24, Title 8, Section 5328.

It is proposed to revise subsection (ℓ) to substitute the word “the” in place of the word “this” to editorially correct language, to delete the reference to “involving large quantities of explosives” as this language is unnecessary, and to substitute the term “shall” in place of the word “must” to be consistent with the format of Title 8.

It is proposed to delete the references to Title 24 and Title 8, Section 5328 as these references are obsolete references and no longer applicable.

Section 5329. Explosive Operations.

The existing title of Section 5329, Explosive Operations, is proposed for revision to include the letter “s” in the word “Explosive” to read “Explosives Operations” to grammatically correct the title to this section.



Initial Statement of Reasons  
Explosives Reorganization

Subsection (a).

Existing subsection (a) requires that mechanical operations involving explosives in excess of one pound be carried out at isolated stations or at intraline distances with the machinery being controlled from remote locations behind barricades or at intraline separations.

It is proposed to repeal the provisions of subsection (a) as the proposed revisions to Section 5328(j) address these concerns. Therefore, the existing provisions of subsection (a) are unnecessary.

New Subsection (a).

Existing subsection (a), as presently written, presents several options as to what can be done to ensure the safety of employees working with explosive materials. Explosive materials manufacturers are required to comply with the Process Safety Management regulation regarding hazard analysis of the process. The existing requirements of subsection (a) vaguely address some of the items that are required of the hazard analysis. For this reason, it is necessary to clearly indicate those areas needing to be addressed by the explosive materials manufacturer.

Therefore, a new subsection (a) is proposed to require a process hazard analysis to be performed for all manufacturing operations involving explosive materials. The analysis is to include such factors as initiation and sensitivity of the product; quantity of explosive materials; blast and thermal output; rate of burning; potential ignition and initiation sources; separation barricades; personal protective equipment; and respiratory and circulatory effects of combustion byproducts.

The proposal is necessary to ensure the employer performs a hazard analysis and considers at least the above referenced factors during the manufacturing process.

New Subsection (b).

New subsection (b), as recommended by the advisory committee, is proposed which requires that employees be provided protection from potential blast overpressures, hazardous fragments and thermal effects when the hazard assessments indicate the probability of an accidental explosion.

This proposal is necessary to require protection from potential blast overpressures, hazardous fragments and thermal effects when the hazard assessments indicate a probability of an accidental explosion. Further, this procedure is necessary to be consistent with current explosive industry practices.

New Subsection (c).

New subsection (c), as recommended by the advisory committee, is proposed which requires the employer to install a quick acting fire detection and extinguishing system

## Initial Statement of Reasons Explosives Reorganization

with the capacity to extinguish potential flash fires in the incipient stage. Such systems shall maximize the speed of detection and application of the extinguishing agent.

This proposal is necessary to ensure a fire detection and extinguishing system is provided having the capability to extinguish potential flash fires in their incipient stage by speed of detection and application of extinguishing agent.

### Subsection (b).

Existing subsection (b), proposed subsection (d), requires that grinding, blending or other processing of static sensitive explosives or pyrotechnic materials are done in atmospheres having greater than 20% relative humidity. This subsection also states that if the relative humidity drops below the 20% level, the operations are to be stopped and secured. This regulation further contains a statement that it is desirable to keep the relative humidity above 20 to 30 percent, except where metal powders are involved, than the relative humidity should be between 50 and 60 percent.

It is proposed to revise subsection (d) to delete the phrase "or pyrotechnics" as "pyrotechnics" is a type of explosive material and therefore, is unnecessary to reference in the regulation and to include the statement "Except for controlled environments where it is necessary to maintain the humidity below 20%, when the ..." to precede the phrase "relative humidity drops below 20 percent" to address those conditions where the operation requires less than 20% humidity and a controlled environment exists. In addition, it is proposed to revise subsection (d) to include the parenthetical phrase "(personnel removed)" following the phrase "above operations shall be stopped and secured" to clarify that a secured operation in this instance means to remove all personnel.

This proposal permits employers/operators to manufacture specialty explosive materials where the humidity must be maintained below 20%. This proposal is necessary to permit listed activities to be conducted when the humidity drops below 20% in controlled environments and controlled conditions because there are special production runs where the humidity must be below the benchmark to obtain the necessary final product.

It is proposed to delete the statement regarding the desirable relative humidity and a discussion on metal powders. This language is unenforceable and not a regulation and therefore is unnecessary.

### Subsection (c).

Existing subsection (c), proposed subsection (e), requires that means be provided to discharge static electricity from hand operated equipment. Also, it contains an informational statement regarding the recommendation to use conductive, non-sparking wheels on hand trucks, buggies, and similar equipment.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (e) to delete the informational statement recommending that conductive wheels be used on such equipment. This language is unenforceable and not a regulation and therefore, is unnecessary.

### Subsection (d).

Existing subsection (d), proposed subsection (f), requires that bulk explosives be kept in covered containers when not being used or processed. It further states that in no case are the explosives to be stored or transported in open containers.

It is proposed to revise subsection (f) to substitute the term "explosive materials" in place of the word "explosives" to be consistent with terminology commonly used in the explosives industry.

### Subsection (e).

Existing subsection (e), proposed subsection (g), requires that explosive materials at any particular workstation be limited to the quantity distance table in Section 5327 and not exceed a four hour supply. It further states that if a four-hour supply would introduce a serious hazard, the available quantity shall be limited to a lesser amount.

It is proposed to revise subsection (g) to include "EXCEPTIONS" for operations that necessarily require more than a four-hour supply of explosives on site, such as operations relating to propellant processing, explosive casting operations, and batch processing of explosive materials.

This proposal is necessary to address conditions where unit production would require the storage of a quantity of explosive materials which exceeds the amount necessary for a four-hour supply such as operations relating to propellant processing, explosive casting operations, and batch processing of explosive materials.

### Subsection (g).

Existing subsection (g), proposed subsection (i), requires that the general safety rules and operating instructions be available at each station. Also, the rules are to include the requirements for bonding and grounding, permissible cleaning agents, and other precautions.

It is proposed to revise subsection (i) to clearly indicate that the safety rules and operating instructions are to be available at each "work station" as the term "station" by itself is not clear and to substitute the word "compatible" in place of the word "permissible" to be consistent with the language within these safety orders. This proposal is necessary to clarify the intent of the regulation.

### Subsection (h).

## Initial Statement of Reasons Explosives Reorganization

Existing subsection (h), proposed subsection (j), requires personnel and explosive limits to be posted.

It is proposed to revise subsection (j) to indicate that it is the explosive “load” limit that is to be “conspicuously” posted. This proposal requires the inclusion of the term “load” before the word “limits” and the inclusion of the word “conspicuously” before the term “posted”. This proposal is necessary to clarify the intent of the regulation.

### Subsection (i).

Existing subsection (i), proposed subsection (k), prohibits regular maintenance and repair work in explosives building unless the explosives have been removed and the area made safe. Minor adjustments or emergency repairs to secure the immediate safety are permitted.

It is proposed to revise subsection (k) to address only major repair or changes that will require specific notification, inspection, and clean-up procedures that clearly indicates when major repairs or changes may be undertaken. This proposal is necessary to ensure that major repairs or changes are accomplished after the explosive materials have been removed, the competent person in immediate charge of the building or site has granted permission, the area has been surveyed to determine there is no residual explosive materials on site, and the area is washed down and maintained wet during the repair or change operation.

### Subsection (j).

Existing subsection (j), proposed subsection (ℓ), requires that tools and equipment used near explosives be appropriate for such material.

It is proposed to revise subsection (ℓ) to substitute the term "explosive materials" in place of the word "explosives" to be consistent with industry terminology and to substitute the phrase "compatible with the explosive materials" in place of the phrase "appropriate for such materials" to clarify the intent of the regulation.

### Subsection (k).

Existing subsection (k), proposed subsection (m), requires spilled or dropped explosives be cleaned up at once.

It is proposed to revise subsection (m) to delete the phrase “or dropped” as this phrase is unnecessary, to substitute the term “explosive materials” in place of the word “explosives” to be consistent with industry terminology, and to substitute the phrase “at once” with the word “immediately” to clarify that this situation needs immediate attention.

Initial Statement of Reasons  
Explosives Reorganization

Similar requirements are contained in proposed Section 5276(h) pertaining to blasting operations and existing Section 5312(j) pertaining to explosives loading and assembly operations covering completely different kinds of operations.

Subsection (ℓ).

Existing subsection (ℓ), proposed subsection (n), requires shipping containers, cleaning rags, and other materials contaminated with explosives be removed daily and disposed of in a safe manner. It also references Section 5240.

It is proposed to revise subsection (n) to substitute the term “explosive materials” in place of the word “explosives” to be consistent with terminology commonly used in the explosives industry and to delete the reference to Section 5240 as this reference is unnecessary.

Subsection (m).

Existing subsection (m), proposed subsection (o), requires fireworks, explosives, or explosive charges shall not be stored near any source of heat.

It is proposed to revise subsection (o) to repeal the unnecessary term "fireworks" as the proposed inclusion of the term “explosive materials” includes “fireworks”, to substitute the term "explosive materials" in place of the word "explosives" to be consistent with industry terminology, to repeal the unnecessary phrase "or explosive charges" as the proposed inclusion of the term “explosive materials” includes “explosive charges”, and to substitute the word "placed" in place of the word "stored" and the word "ignition" in place of the word "fire". This proposal is necessary to be consistent with terminology used throughout these safety orders and to clarify the intent of the regulation.

Subsection (n).

Existing subsection (n), proposed subsection (p), requires the employer to provide a warning system to alert persons approaching a hazardous operation or area.

It is proposed to revise subsection (p) to delete the phrase “Provide a” and to include the phrase “A warning system shall be provided” to be consistent with the format of Title 8 and to substitute the term "system" for the word "device" to clarify that it is the warning “system” that needs to be activated when operations are being conducted.

New Subsection (q).

New subsection (q) is proposed that requires the employer to ensure employees are attired in clothing and footwear that will not be a source of ignition or retain explosive materials.

## Initial Statement of Reasons Explosives Reorganization

This proposal is necessary to ensure that employees working in processing facilities wear flame retardant, non-static generating, pocket-less coveralls to eliminate any potential sources of ignition. Also, the restriction for footwear is necessary to ensure the sole of the shoe will not trap and retain explosive materials. A serious incident could result should a friction-initiated ignition occur.

This proposal will have no effect on the regulated public as it is already industry practice of explosive manufacturers to provide personnel protective equipment. As part of the employer's process safety management program, Section 5329(a) requires a process hazard analysis be performed on all operations involving explosive materials including Section 5329(a)(8) pertaining to personal protective equipment. Section 5329(d) and (e) contain regulations on how to control static electricity.

The advisory committee recommended to make the regulation specifically clear that the coverall worn by an employee working in the processing facilities shall be fire retardant, non-static, and pocketless and that the footwear has non-explosive capturing soles.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5329.)**

### Section 5330. Testing.

The existing title of Section 5330 reads "Testing".

It is proposed to revise the existing title of Section 5330 to read "Testing of Explosive Materials" to specify what is being tested.

### Subsection (a).

Existing subsection (a) requires the detonation or ignition of explosive charges or fireworks for testing be done only in isolated locations according to the quantity distance table contained in Section 5252 or that barriers will be provided to protect any person connected with the test.

It is proposed to revise subsection (a) to substitute the term "pyrotechnics" in place of the term "fireworks" and to delete the existing word "so" followed by the word "location". This proposal is necessary to omit unnecessary language and to be consistent with terminology used throughout these safety orders.

In addition, it is proposed to delete the reference to the quantity and distance table in Section 5252 as this reference is unnecessary and duplicates existing regulatory language. Also, it is proposed to include the phrase "/shelters shall be" following the word "barriers" to specify that "shelters", too, be provided; to delete the word "that"; and to substitute the phrase "provided so all personnel will be protected" in place of the phrase "provided that will protect any person connected with the test" to clearly indicate that even personnel not involved with the testing are to be protected, too. This proposal is

Initial Statement of Reasons  
Explosives Reorganization

necessary as it reflects current explosives industry practice to test these devices remote from personnel.

Subsection (b)

Existing subsection (b) requires that adequate shelter or distance be provided to protect employees detonating explosives.

It is proposed to repeal subsection (b) as its requirement is contained in proposed subsection (a). Therefore, the provision of subsection (b) is unnecessary.

Subsection (c).

Existing subsection (c), proposed subsection (b), requires when tests are being conducted or explosives are being detonated, only authorized persons are to be present, burning or detonation areas are to be fenced or posted, and warning devices used to alert persons approaching the area.

It is proposed to revise subsection (b) to substitute the term "explosive materials" in place of the word "explosives" wherever the word "explosives" appears in the regulation to be consistent with industry terminology. Also, it is proposed to include the phrase "or provided with controlled access" following the phrase "detonated or burned shall be fenced" to provide the employer/licensed blaster with an alternative to a fenced area provided access is controlled into the test area. In addition, it is proposed to delete the word "adequate" wherever this word appears in the regulation as the word "adequate" is unclear and therefore, unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5330.)**

Section 5331. Disposal of Waste Explosives and Fireworks.

Subsection (a).

Existing subsection (a) contains requirements for the destruction of explosives, and references the quantity and distance table for the appropriate distances to be maintained from inhabited buildings, public highways, operating buildings, and all other exposures.

Subsections (b), (c), and (d).

Existing subsections (b), (c), and (d) also contain provisions for the elimination of scrap explosives, blasting shelters, and when a warning device should be used, respectively.

The provisions of subsections (a), (b), (c), and (d) are proposed for transfer to proposed Section 5240, Disposal of Explosive Materials, specifically subsections (b), (g), (c), and

Initial Statement of Reasons  
Explosives Reorganization

(d), respectively, to locate all the regulations dealing with explosive materials disposal into one section of the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5331.)**

**Article 120. Mixing Blasting Agents.**

The title of existing Article 120 is entitled “Mixing Blasting Agents”.

The title to Article 120 is proposed for revision to delete the reference to the word "Mixing". This proposal is necessary to inform the regulated public that this Article applies generically to blasting agents rather than giving the impression that the regulations apply only to the mixing of blasting agents.

**Section 5340. General.**

The first paragraph of Section 5340 contains the general statement regarding transportation, storage, and use of blasting agents.

It is proposed to revise the first paragraph and to identify it as subsection (a) to be consistent with the format of Title 8 and to substitute the term “explosive materials” in place of the word “explosives” to reflect language commonly used in the explosives industry.

**Subsection (b).**

The second paragraph of Section 5340 states that water gels shall be transported, stored, and used in the same manner as explosives or blasting agents in accordance with the classification of the product.

It is proposed to revise the second paragraph and to identify it as subsection (b) to be consistent with the format of Title 8 and to require “slurries” and “emulsions” to be transported and used in the same manner as explosive materials or blasting agents in accordance with the classification of the product. This proposal is necessary to specify in the regulation that the terms “slurries” and “emulsions” are types of blasting agents to be treated in the same manner as explosive materials. These blasting agents can become or are as sensitive to the same incident causation factors as explosive materials.

**Section 5341. Mixing of Blasting Agents--Location.**

**Subsections (a).**

Existing subsection (a) requires that buildings or other facilities, including mobile equipment, used for mixing of blasting agents be located in accordance with the quantity



Initial Statement of Reasons  
Explosives Reorganization

and distance table contained in Section 5252, unless the mobile equipment is in the process of loading blast holes.

It is proposed to revise subsection (a) to include the provisions of existing Section 5344(h), except for the exemption of firearms carried by guards, as new subsection (a)(1) that prohibits smoking, matches, open flames, spark-producing devices, and firearms inside of or within 50 feet of any building or facility used for the mixing of blasting agents. Also, this regulation requires that the land surrounding the mixing plant be kept clear of bush, dried grass, leaves, and other combustible materials for a distance of at least 50 feet.

This proposal is necessary to prevent contamination of ingredients for blasting agents and to prevent accidental denotation or occurrence of a fire near the mixing plant. The provisions of new subsection (a)(1) are proposed for transfer from existing Section 5344(h). Included in this proposed transfer, it proposed to delete the exception that security personnel may carry firearms within 50 feet of any mix building or facility. This proposal is necessary to help prevent the accidental or deliberate discharge of firearms that could result in the initiation of explosive materials and resultant damage to the facilities and possible serious injuries or deaths of employees. Further, it is proposed to include the term “combustible” before the word “materials” to clearly indicate that it is more than dried vegetation that is to be maintained more than 50 feet from the facility to mitigate the possibility of an incident that could result in the initiation of an incident involving the explosive materials. This proposal does not preclude the maintaining of combustible materials that are incidental to the process within this distance limitation.

This proposed transfer is necessary as Section 5341 that pertains to the mixing of blasting agents – location is the more appropriate section in the GISO to contain the prohibition of sources of ignition inside or within 50 feet of any building used to mix blasting agents and to require the clearance of combustible materials around a mixing plant. Also, this proposal is at least as effective as the counterpart federal regulation, 29CFR 1910.109(g)(2)(vi)(d) that prohibits sources of ignition inside or within 50 feet of any building used to mix blasting agents.

Subsection (c).

Existing subsection (c), proposed subsection (c), requires that ammonium nitrate fertilizer be stored in compliance with NFPA No. 490-1975 and references Title 24 and Title 8, Section 5341.

It is proposed to revise subsection (c) to delete the reference to “Ammonium nitrate fertilizer shall be stored in compliance with NFPA No. 490-1975” as the employer is already required to comply with this requirement through enforcement of local jurisdictions. Therefore, this proposal eliminates unnecessary language from the regulation. In addition, it is proposed to delete the references to Title 24 and Title 8, Section 5341 as these references are obsolete references and no longer applicable.

Initial Statement of Reasons  
Explosives Reorganization

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5341.)**

Section 5342. Mixing Building.

Subsection (b).

Existing subsection (b) states that the Division may require explosion venting if heavy construction is used.

It is proposed to repeal subsection (b) as the provision of this subsection is nonspecific and permissive and therefore, unnecessary.

Subsection (c).

Existing subsection (c), proposed subsection (b), requires the mixing building layout provide physical separation between the finished product storage and the mixing and packaging operations.

It is proposed to revise subsection (b) to include a reference to the intraline distances contained in Section 5327. This proposal is necessary to clearly indicate that the physical separation of the process and packaging operation is to conform to the applicable intraline distances contained in Section 5327.

Subsection (d).

Existing subsection (d), proposed subsection (c), requires that floors in storage areas and in processing plants be of concrete or non-absorbent material.

It is proposed to revise subsection (c) to delete the phrase “in storage areas and” as this phrase is unnecessary. The reference to storage areas is unnecessary as storage is normally an integral portion of a processing plant. In addition, it is proposed to revise subsection (c) to require that the floors be free of cracks and crevices. This proposal is necessary to ensure that the floors are crack and crevice free to prevent the accumulation of explosive material dust in those areas that could become a source of a major incident.

New Subsection (d).

New subsection (d) is proposed which prohibits the installation of floor drains or piping into which molten materials could flow in the event of a fire.

This proposal is necessary to transfer the existing requirement regarding the construction of floors and the design of floor drains and piping drainage and piping from existing Section 5344(g) and existing Section 5346(b)(2) to a more logical location in proposed Section 5342(d) as this provision should be a general requirement for mixing buildings rather than mixing equipment.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (e).

Existing subsection (e) requires that liquid fuel be stored outside the mixing building and oxidizer area and located in such a way that in case of tank rupture, the oil fuel will drain away from the mixing plant building. In addition, this regulation requires the shut-off valves be at the tank and that suitable means be provided to prevent the flow of oil fuel to the mixer in case of fire.

It is proposed to revise subsection (e) to indicate that the storage area is to be designed to either retain the liquid fuel or permit the spilled material to drain away from the building. This proposal is necessary to permit the storage area to be designed to use a dike or other method within a liquid fuel area to contain liquid or to permit draining the area in the event of a tank spill or rupture. It may not be acceptable or possible to drain the fuel away from the building or storage area because of local ordinances or topography.

Subsection (f).

Existing subsection (f) requires the building be well ventilated and directs the reader to a statement that the recommendation contained in Pamphlet No. 1 of the Institute Makers of Explosives, 1965 edition, is evidence of good practice.

It is proposed to include the referenced information within the regulation and to reference the 1993 updated edition of the Institute of Makers of Explosives. This reference is also contained in existing Section 5342 \* following subsection (f) and existing Section 7262(f) of the MSO and are proposed for transfer to Section 5342(f) with reference to the updated edition of the Institute of Makers of Explosives. The proposed actions are necessary to transfer this reference as a "NOTE" with an updated edition of the Institute of Makers of Explosives into the regulation.

Subsection (i).

Existing subsection (i) requires that blasting agents and fuels be removed from the mix house, and the equipment and work area are washed down before major or any open flame repairs are initiated.

It is proposed to revise subsection (i) to require these steps be accomplished prior to the initiation of major "work, other than routine maintenance," or open flame repairs. This proposal is necessary to clearly indicate that only major work or open flame repairs will require the removal of blasting agents and fuel and the area washed down.

Subsection (j).

Existing subsection (j) requires that before welding repairs to hollow loading shafts be commenced, all oxidizer material be removed from outside and inside of the shaft and the shaft vented with a specified size opening.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (j) to delete the reference to the specific minimum size opening, the requirement for the minimum 1/2 inch diameter venting hole, to permit the employer/operator to determine the size vent hole necessary to safely vent vapors/fumes developed during welding repairs. This proposal deletes prescriptive language and makes the regulation a performance standard.

### Subsection (k).

Existing subsection (k) requires that all internal combustion engines used for electric power generation be located outside the mixing plant building 50 feet from the openings in the building and be ventilated and isolated by a fire wall having a one hour fire-resistance rating. The exhaust system is to be equipped with a spark arrestor and be located so any spark emission will not be a hazard to any material in or near the plant. Also, this regulation contains references to building standards, Title 24, Title 8, Section 5342(a) – (g) and (k).

It is proposed to revise Section 5342 to delete the references to Title 24 and Title 8, Section 5342(a) – (g) and (k) as these references are obsolete references and no longer applicable. The reference to building standards are proposed for deletion as these regulations are proposed to apply to all industries, construction, mining, tunneling, as well as general industry, making a blanket application of a building standards inappropriate in many cases. Where a fire safety issue is present, the local fire agencies and/or the State Fire Marshal having the authority will require the necessary provisions to be accomplished. Therefore, the reference to Title 24 and the corresponding reference to Title 8 are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5342.)**

### Section 5344. Mix Room Equipment.

#### Subsection (a).

Existing subsection (a) requires that mixing facilities comply with the fire prevention requirements of this section, and the mixer be designed to minimize the hazards related to friction, heating, compaction, overloading and confinement.

It is proposed to revise subsection (a) to substitute the term “mixing equipment” in place of the word “mixer” to clarify that it is the mixing equipment, not just the mixer, that needs to be designed appropriately; to eliminate the phrase “and especially” as this language is unnecessary; and to include the phrase “and the accumulation of static electricity”, a condition that could result in initiation of an accident. The proposal is necessary to ensure that all equipment used in the mixing process is grounded to prevent inadvertent discharge of static electricity that could result in igniting explosive materials.

#### Subsection (b).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) requires that bearings and gears are of the outboard type and protected from the accumulation of dust.

Is it proposed to revise subsection (b) to substitute the term "explosive materials" in place of the word "dust" to be consistent with industry terminology and to clarify that explosive materials which includes dust is not allowed to accumulate on the bearings or gears.

Subsection (e)

Existing subsection (e) requires that pumps or conveyors that could overheat the blasting agents or create excessive static electricity not be used.

It is proposed to repeal the provisions of subsection (e) as the proposed revisions to subsection (a) to include the hazards of the accumulation of static electricity will address these concerns. Therefore, the provisions of subsection (e) are unnecessary.

Subsection (f).

Existing subsection (f), proposed subsection (e), requires that all electrical equipment in the mixing room conform to the requirements of Class II, Division I, Hazardous Locations of the California Electrical Safety Orders.

It is proposed to revise subsection (e) to delete redundant language as the reference to the Electrical Safety Orders includes the requirements for Class II, Division I, Hazardous Locations, and to delete the phrase "to dissipate static electricity to the ground" as this language is unnecessary. The Electrical Safety Orders of Title 8 already require the bonding of electrical equipment to dissipate errant electrical current.

Subsection (g).

Existing subsection (g), proposed subsection (f), requires that an automatic water-deluge system with adequate capacity be provided to protect mixers and finished blasting agent's storage areas in the plant. Also, the floors are to be constructed without open floor drains and piping into which molten materials could flow and be confined in case of fire. The floor, mixing and packaging equipment is to be washed down periodically to prevent excessive dust accumulation.

It is proposed to revise subsection (f) to transfer the requirement regarding the construction of floors and the design of floor drains and piping to proposed Section 5342(d). This proposal is necessary to transfer this existing requirement from proposed Section 5344(f) to a more logical location in proposed Section 5342(d) as this provision should be a general requirement for mixing buildings rather than mixing equipment. In addition, it is proposed to substitute the word "or" in place of the phrase "and other" to clarify the intent of the regulation.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (h).

Existing subsection (h), proposed subsection (g), prohibits smoking, matches, lighters, open flames, spark-producing devices, explosives, and fire arms within 50 feet of any mix building or facility, with an exception for fire arms carried by security personnel. Also, the land surrounding the mixing plant is to be kept clear of brush, dried grass, leaves, and other materials.

It is proposed to transfer the provisions of existing subsection (h) to proposed Section 5341(a)(1). This proposal is necessary as Section 5341 that pertains to mixing of blasting agents – location is the more appropriate Section in the GISO to contain the prohibition of explosives inside or within 50 feet of any building used to mix blasting agents and to require the clearance of combustible materials around a mixing plant.

Subsection (j).

Existing subsection (j), proposed subsection (h), limits the quantity of blasting agent that may be permitted in or near the mixing or packaging area to the amount of blasting agent that can be produced in four hours. The limit may also be determined by using the data from the Quantity and Distance Table, Section 5252, whichever quantity is less.

It is proposed to revise subsection (h) to include a reference to the appropriate table, TABLE EX-1, as it identifies where the information for the quantity and distance, Table EX-1, can be found

Subsection (k).

Existing subsection (k), proposed subsection (i), requires equipment and handling procedures be designed to prevent contamination of the mix by foreign objects or materials.

It is proposed to revise subsection (i) to delete the reference to the word “Both” as this word is unnecessary and to include the phrase “into the mix” and the end of the sentence to clearly indicate that the intent of the regulation is to prevent the introduction of foreign objects into the mix that could contaminate explosive materials. Foreign objects or materials can result in a reaction with the mixture that in turn could result in a catastrophic incident, destruction of facilities, and death of employees, or the resultant mix would result in delayed detonation or misfire.

Subsection (ℓ).

Existing subsection (ℓ), proposed subsection (j), requires that a daily visual inspection be made of the mixing, conveying, and electrical equipment within a mixing room or building. Included in this regulation are references to Title 24, Title 8, Section 5344(a), (f), and (g).

Initial Statement of Reasons  
Explosives Reorganization

It is proposed to revise subsection (j) to require a visual inspection of the process and appurtenant equipment each day prior to start of operations. This proposal is necessary to ensure that the equipment is in good operating condition to preclude the introduction of factors that would result in the initiation of an explosion and the resulting negative consequences. Also, this proposal is necessary to eliminate the employer from having to inspect the operation when no work is to be accomplished.

In addition, it is proposed to revise subsection (j) to delete the references to Title 24 and Title 8, Section 5344(a), (f), and (g) as these references are an obsolete references and no longer applicable.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5344.)**

Section 5345. Composition.

Subsection (a).

Existing subsection (a) contains a preface statement that the requirements of this section are to be considered when determining blasting agent composition. It also requires that the sensitivity of a blasting agent be determined by testing at regular intervals using a No. 8 test blasting cap.

It is proposed to revise subsection (a) to delete the statement regarding the consideration of the provisions of this section when determining blasting agent composition as this it is already required that employers are to comply with these orders and therefore, this statement is unnecessary. Also, it is proposed to include the phrase “or equivalent” following the term “blasting cap” because it is necessary to clearly indicate that a No. 8 test blasting cap is not the only means for determining the sensitivity of the explosive materials.

Subsection (b).

Existing subsection (b), proposed NOTE, provides examples of oxidizers that have small particle size, and therefore shall be handled with greater care.

It is proposed to revise existing subsection (b) as a “NOTE” as the existing language of subsection (b) was intended to be informational only. As a result, it is proposed to delete the word “shall” and in its place include the word “should” to follow the phrase “be handled with greater care” as the language in this “NOTE” is intended for information only and not for enforcement purposes.

Subsection (d).

Existing subsection (d), proposed subsection (c), prohibits the use of crude oil and crankcase oil in the composition of explosives and explains why they should not be used.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to revise subsection (c) to delete the explanatory portion of this regulation that explains why crude oil and crankcase oil should not be used. The language specifically states that crude oil and crankcase oil may contain light ends that offer increased vapor explosion hazards or gritty particles that tend to sensitize the resulting blasting agent. This language is subjective information and therefore, is unnecessary.

### New EXCEPTION.

Existing subsection (g) of this Section is proposed as a new “EXCEPTION”. It is proposed to transfer existing subsection (g) to immediately follow proposed subsection (c) of this Section as an “EXCEPTION”. Also, it is proposed to state the more appropriate term "subsections" in place of the word "paragraphs" to be consistent with the format of Title 8. In addition, it is proposed to reference only proposed subsections (b) and (c) as a result of the proposed renumbering of this section. Existing subsection (f), proposed subsection (e), as originally referenced in this regulation, conflicts with Section 5241(a) and the explosive industry does use these chemicals in the blasting agent.

This proposal is necessary as it clarifies as an “EXCEPTION” that fuel oils specified in proposed subsections (b) and (c) can be used by qualified personnel capable of determining the overall hazards of the resulting products.

### Subsection (e)

Existing subsection (e), proposed subsection (d), requires that metal powders are to be kept dry and stored in moisture resistant containers. Also, solid fuels are to be used in a manner to minimize dust explosion hazards.

It is proposed to revise subsection (d) to delete the term "Solid" as this term is unnecessary. This proposal is necessary to require precautions to minimize dust explosion hazards in general, not just with solid fuels. The current use of this term “Solid” fuel denotes the type used for rocket or projectile fuel, usually a solid, molded unit, not just granular metals. Therefore, the term “Solid” is proposed to be deleted for clarity.

### Subsection (f).

Existing subsection (f), proposed subsection (e), prohibits the use of peroxides and chlorates when mixing blasting agents.

It is proposed to revise subsection (e) to include the prohibition of perchlorates also. This proposal is necessary as perchlorates may become unstable, resulting in rapid deterioration and possible conflagration, when used in combination with other explosive materials.

### Subsection (g).



Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (g) exempts paragraphs (c), (d) and (f) providing the compositions are made under the supervision of a qualified person.

It is proposed to transfer existing subsection (g) to be located immediately following proposed subsection (c) of this Section as, more appropriately, an “EXCEPTION”. This proposed transfer is necessary as it relocates regulatory language to a more appropriate location as a result of the proposed renumbering of this section.

New Subsection (f).

A new subsection (f) is proposed that requires blasting agents be measured or proportioned to ensure control of sensitivity and oxygen balance.

Proposed subsection (f) is necessary to ensure that blasting agent ingredients are measured or proportioned to ensure quality control. The provisions are also contained in existing Section 7264(g) of the MSO that are proposed for transfer to proposed new subsection (f).

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5345.)**

Section 5346. Blasting Agent Storage.

Existing Section 5346 contains requirements for the storage of blasting agents when stored alone or in warehouses, construction requirements for the storage areas, use of on-highway vehicles for temporary storage, the signing required on the trailers when used, and other general requirements relating to the storage of explosives materials or blasting agents.

Subsection (b).

Existing subsection (b) gives specific requirements for the storage of blasting agents, including the types of structures and construction that may be used, limitations and restrictions on open floor drains and piping, lockable doors, and other requirements.

It is proposed to transfer the provisions of existing subsection (b)(2) regarding floors to be constructed to eliminate open floor drains and piping into which molten materials could flow and be confined in case of fire to proposed Section 5342(d). This proposal is necessary as this proposed action relocates this provision to a more appropriate location in Section 5342(d) regarding mixing buildings.

It is proposed to repeal the remaining provisions of subsection (b) as the construction requirements for explosive materials storage duplicate the requirements contained in proposed Section 5253.1. Therefore, these provisions of subsection (b) are unnecessary.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (c).

Existing subsection (c) permits the temporary storage of blasting agents in semi-trailers, trailer vans, or haulage trucks provided they are located as required by Article 114 and have the ability to be secured to prevent theft.

It is proposed to repeal the provisions of subsection (c) as these requirements pertaining to Type 5 magazines duplicate the provisions contained in proposed Section 5251 and TABLE EX-3 and Section 5253.1(e)(1). Therefore, these provisions of subsection (c) are unnecessary.

Subsection (d).

Existing subsection (d), proposed subsection (b), requires that trucks and trailers transporting blasting agents be posted with the word “OXIDIZERS” with specific size letters and colored signs with yellow letters on a black background.

It is proposed to revise subsection (c) to require the legend to state “EXPLOSIVES” in place of the word “OXIDIZERS” in red letters on a white background. This proposal is necessary to be at least as effective as the federal counterpart regulation, 29CFR 1926.902(h) that requires the legend to read “EXPLOSIVES” in place of the word “OXIDIZERS” and the legend to be in red letters on a white background.

Subsection (g).

Existing subsection (g), proposed subsection (e), requires any electrical driven conveyors for loading or unloading bins to conform to the requirements of the California Electrical Safety Orders and be designed to minimize damage from corrosion.

It is proposed to revise subsection (e) to delete the reference to the word “California” preceding the phrase “Electrical Safety Orders” as the reference to California is unnecessary.

Subsection (h).

Existing subsection (h) prohibits the use of blasting to loosen caked oxidizers.

It is proposed to repeal the provision of subsection (h) as this requirement is contained in proposed Section 5363(k), and therefore, this provision is unnecessary.

Subsection (i).

Existing subsection (i) requires the storage warehouse to be under the supervision of a qualified person who shall be not less than 21 years of age.

It is proposed to repeal the provision of subsection (i) as this requirement duplicates the requirements throughout Group 18 that anyone handling explosive materials to be under

Initial Statement of Reasons  
Explosives Reorganization

the supervision of a licensed blaster who is at least 21 years old. Therefore, the provision of subsection (i) is unnecessary.

Subsection (j).

Existing subsection (j) requires that warehouses used to store blasting agents will be located in accordance with the provisions of the Table of Distances and the Table of Separation Distances of Ammonium Nitrate and Blasting Agents.

It is proposed to repeal the provision of subsection (j) as TABLE EX-2 of Section 5252 already requires that blasting agents and ammonium nitrate be placed at specific distances depending on the quantity. Therefore, the provision of subsection (j) is unnecessary.

Subsection (k).

Subsection (k) prohibits smoking, matches, open flames spark producing devices and firearms within 50 feet of blasting agent storage facilities. Approved smoking areas are to be established. Included in this regulation are references to Title 24 and Title 8, Section 5346(a), (b), and (j).

It is proposed to repeal the provisions of subsection (k) as these requirements duplicate the provisions of existing Section 5256(b) that prohibit sources of ignition inside or within 50 feet of magazines. Therefore, the provisions of subsection (k) are unnecessary. In addition, it is proposed to delete the reference to Title 8, Section 5346(a), (b), and (j) as this reference is an obsolete reference and no longer applicable.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5346.)**

Section 5347. Transportation of Blasting Agents.

Subsection (c).

Existing subsection (c) requires that trucks and trailers transporting blasting agents be posted with the word “OXIDIZERS” with specific size letters and colored signs with yellow letters on a black background.

It is proposed to revise subsection (c) to require the legend to state “EXPLOSIVES” in place of the word “OXIDIZERS” in red letters on a white background. This proposal is necessary to be at least as effective as the federal counterpart regulation, 29CFR 1926.902(h) that requires the legend to read “EXPLOSIVES” in place of the word “OXIDIZERS” and the legend to be in red letters on a white background.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5347.)**

Initial Statement of Reasons  
Explosives Reorganization

Section 5348. On-Site Mixed Water Gels and Blasting Agents.

The existing title of Section 5348 indicates the regulation applies to on-site mixing of water gels and blasting agents.

It is proposed to revise the title of Section 5348 to include slurries and emulsions. This proposal is necessary to ensure that specific safeguards are undertaken as the mixing of these types of explosive materials present hazards similar to those already addressed.

Subsection (c).

Existing subsection (c) requires ingredients classified as Class A or Class B explosives to be stored in compliance with Article 114.

It is proposed to revise subsection (c) to delete the references to the Class A or Class B designators as Article 114 applies to all classes of explosives. The specific references to Class A or Class B explosives are unnecessary as the term explosives already includes the specific classes. Also, the proposed deletion of these designators are necessary to be consistent with the other revisions proposed throughout the explosives regulations. In addition, it is proposed to substitute the term “explosive materials” in place of the word “explosives” to be consistent with terminology commonly used in the explosives industry. Therefore, the proposed action will have no effect on the regulated public.

Subsection (d).

Existing subsection (d) requires that prilled, grained, or granulated ammonium nitrate be stored in accordance with NFPA No. 490-1975.

It is proposed to repeal the provision of subsection (d) as this requirement is contained in the proposed revisions to Section 5348(a) and Section 5359(c). Therefore, the provision of subsection (d) is unnecessary.

Subsection (e).

Existing subsection (e), proposed subsection (d), requires that liquid ammonium nitrate solutions be stored in containers or permanent tanks in a safe location acceptable to the Division. Additionally, it requires that spills or leaks that may contaminate combustible materials be cleaned up immediately.

It is proposed to revise subsection (d) to delete references to the locations of the storage, the acceptability to the Division, and the conditional phrase concerning the clean up of spills or leaks. The references to the locations of the storage are unnecessary as there are already regulations that address storage and location of ammonium nitrate, specifically Section 5253. The reference to the phrase “acceptable to the Division” is unnecessary as there is no criteria as to what would be acceptable. Also, the deletion of the conditional phrase “which may contaminate combustible materials” is necessary as it is inappropriate

Initial Statement of Reasons  
Explosives Reorganization

and unsafe to have any spilled ammonium nitrate solution remain in the storage area. As a result, this proposal will require that all spills or leaks of liquid ammonium nitrate be cleaned up immediately.

Subsection (f).

Editorial revisions are proposed for existing subsection (f), proposed subsection (e), to state that mixing equipment shall comply with the following requirements as stated in subsections (f)(1) through (f)(5).

Subsection (f)(2).

Existing subsection (f)(2), proposed subsection (e)(2), requires that electric wiring and motors comply with Class II, Division 2, Hazardous Location, California Electrical Safety Orders.

It is proposed to revise subsection (e)(2) to delete the reference to Class II, Division 2, Hazardous Locations and the word "California" and in its place include the word "the". This proposal is necessary to eliminate redundant and therefore, unnecessary references.

Subsection (f)(3).

Existing subsection (f)(3), proposed subsection (e)(3), requires that all electric motors and electrically operated proportioning devices and equipment to be electrically bonded.

It is proposed to revise subsection (e)(3) to clarify the bonding and grounding requirements to indicate that all exposed metal parts, electrical equipment, and personnel are to be at the same electrical potential to eliminate the possibility of a condition in which an electric arc (spark) could develop. Also, it is proposed to delete the specific references to the types of electric equipment as the generic term "electric equipment" is sufficient to convey the intent of the regulation. In addition, it is proposed to include the term "personnel" because personnel may have different static electrical levels with other equipment that could produce static discharge that could cause an explosive initiation. This proposal is necessary to ensure effective bonding and grounding means are provided to eliminate electrical discharge producing sparks.

Subsection (f)(4).

Existing subsection (f)(4), proposed subsection (e)(4), requires the mixer to be designed to minimize the probability of ignition or explosion from heating or compaction of explosive materials and be provided with specifically located gears and bearings with specified clearances.

It is proposed to revise subsection (e)(4) to address the mixing system, to specify that all moving parts of this system be designed to prevent heat build up, to remove the specific references to certain types of actions and machinery parts, and to specify those machine

## Initial Statement of Reasons Explosives Reorganization

parts which could heat up from excessive bearing friction and are in contact with the explosive materials. This proposal is necessary to clarify the intent of the existing regulations.

### Subsection (g).

Existing subsection (g) states that pumps and conveyors that could overheat blasting agents or cause a fire shall not be used.

It is proposed to transfer the provisions of subsection (g) to proposed subsection (e)(4) to address this concern. This proposal is necessary to relocate the provisions of existing subsection (g) to a more appropriate location in proposed subsection (e)(4).

### Subsection (i).

Existing subsection (i), proposed subsection (g), requires that a UL approved fire extinguisher, 4B:C or equivalent, be provided for fires not involving blasting agents or explosives.

It is proposed to revise subsection (g) to require that a minimum size and class of the fire extinguisher be provided, 4-A:20-B:C, to be consistent with the NFPA rating system adopted in 1955. The proposal to provide fire extinguishers that are classified as “A” rated and “20-B”, in addition to the existing “C” rating, is necessary because fires around mixing equipment could include combustible materials such as wood, cloth, paper, rubber, and many plastics. The advisory committee recommended to specify the size of the fire extinguisher to “20-B” to clearly define the capacity of the extinguisher based on the NFPA rating system adopted in 1955. Also, the reference to the phrase “to use for fires not involving blasting agents or explosives” is proposed for repeal. This language is unnecessary as it duplicates the provisions of proposed new Section 5276(ℓ) that prohibits explosive materials fire fighting.

### Subsection (k).

Existing subsection (k), proposed subsection (i), requires that a warning sign be posted on the front, sides, and rear of the mixing unit with the word “OXIDIZERS” with specific size letters and colored signs with yellow letters on a black background.

It is proposed to revise subsection (i) to require the legend to state “EXPLOSIVES” in place of the word “OXIDIZERS” in red letters on a white background. This proposal is necessary to be at least as effective as the federal counterpart regulation, 29CFR 1926.902(h) that requires the legend to read “EXPLOSIVES” in place of the word “OXIDIZERS” and the legend to be in red letters on a white background.

### Subsection (ℓ).

## Initial Statement of Reasons Explosives Reorganization

Existing subsection (ℓ), proposed subsection (j), requires that bulk delivery vehicles are to conform to this section.

In addition to editorial revisions that clarify the intent of the regulation, it is proposed to revise subsection (j) to include mixing vehicles with these requirements to require when repairing mixing vehicles, the same procedures required for bulk delivery are to be followed. This proposal is necessary because mixing vehicles present the same hazards and concerns employers confront with delivery vehicles.

### Subsection (ℓ) (2).

Existing subsection (ℓ)(2), proposed subsection (j)(2), contains requirements for the welding and repair of hollow shafts with a minimum ½ inch diameter size hole to vent the shaft.

It is proposed to revise subsection (j)(2) to include the term “loading” before the word “shaft” to clearly indicate the regulation is addressing hollow loading shafts. Also, the specific dimension requirement for the venting hole when welding or repairing a hollow loading shaft is proposed for repeal. This proposal is necessary to permit the employer/user to determine the minimum size of the hole necessary for the shaft being repaired and the anticipated hazard.

### Subsection (m).

Existing subsection (m), proposed subsection (k), requires the entire loading and mixing equipment be cleaned frequently to insure against accumulations of ingredients and always before any open flame work is performed.

It is proposed to revise subsection (k) to remove unnecessary modifying adjectives such as “frequently”, “always”, and “any” and to substitute the phrase “prevent hazardous” before the word “accumulations” in place of the phrase “insure against”. These proposed revisions are necessary to remove vague terms and to clarify the intent of the regulation.

### Subsection (o).

Existing subsection (o) requires that bulk delivery vehicles be maintained in good mechanical condition.

It is proposed to repeal the provisions of subsection (o) as this requirement duplicates the provision already contained in proposed Section 5262(f) that requires maintaining the vehicle in good mechanical condition. Therefore, the provision of subsection (o) is unnecessary.

### Subsection (p).

## Initial Statement of Reasons Explosives Reorganization

Existing subsection (p), proposed subsection (m), requires the operator to be trained in the safe operation of the vehicle and its mixing, conveying, and related equipment. Also, the regulation requires that he should be familiar with the commodities being delivered and the general procedure for handling emergency situations.

It is proposed to revise subsection (m) to delete the gender reference to “He” and therefore, combine the two regulatory sentences. This proposal is necessary to eliminate specific gender references in the regulation.

### Subsection (q).

Existing subsection (q) prohibits the simultaneous hauling of blasting caps or other explosives on bulk trucks unless a special wood or non-ferrous lined container is installed for the explosives. In addition, the explosives shall be shipped in containers specified by the U.S. Department of Transportation.

It is proposed to repeal the provisions of subsection (q) as these requirements duplicate the transportation requirements of proposed Section 5262(c). Therefore, the provisions of subsection (q) are unnecessary.

### Subsection (r).

Existing subsection (r), proposed subsection (n), requires caution in the movement of vehicles to avoid driving over or dragging hoses over firing lines, cap wires or explosive materials.

It is proposed to revise subsection (n) to substitute the term "detonator" in place of the word "cap" and to delete the specific gender reference to “his” and in its place include the word “the”.

This proposal is necessary as it provides language that is consistent with the Group 18 regulations and consistent with terminology commonly used in the explosives industry and eliminates specific gender references.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5348.)**

## **Article 121. Snow Avalanche Blasting.**

### Section 5356. Safety Fuse

Existing Section 5356 contains the requirements to be followed when using safety fuse for snow avalanche blasting. The safety fuse is to be water resistant, have a minimum burning time of 70 seconds, only an approved fuse lighter shall be used and the lighter shall not be attached to the safety fuse until just prior to time of ignition, and the cut end of fuses be protected for damage.



Initial Statement of Reasons  
Explosives Reorganization

Subsection (b).

Existing subsection (b) states that safety fuse used in snow avalanche blasting be of sufficient length to provide a minimum burning time of 70 seconds from ignition to detonation.

It is proposed to revise subsection (b) to raise the minimum burning time for the safety fuse from 70 to 90 seconds. This proposal is the result of the advisory committee's consensus to be consistent with other regulatory entities, as currently, California's regulation is less stringent than that required by other state and the U.S. Forest Service.

New Subsection (e).

New subsection (e) is proposed that prohibits the installation of fuse igniters on damaged fuse.

New subsection (e) is necessary to ensure fuse igniters are not installed on damaged fuse ends, as serious incidents can occur, such as rapid fuse burn, delay in ignition, or other hazards that could endanger the blaster when an attempt is made to ignite a damaged fuse.

Section 5357. Placing Explosives Charges.

Subsection (a).

Existing subsection (a) requires that charges are to be placed, thrown or propelled to the desired location in a safe manner as recommended by the manufacturer.

It is proposed to revise subsection (a) to delete the reference to the phrase "in a safe manner recommended by the manufacturer of the explosive material and/or device" and include instead the phrase "from a safe position or by one of the following methods:". This proposal is necessary to address the fact that manufacturers do not recommend some of the methods that have been developed and proven effective and safe by industry for snow avalanche blasting. Therefore, this proposed action is necessary to be consistent with the practices of the snow avalanche blasting industry.

As a result, it is proposed to include new subsections (a)(1) and (a)(2) that will require the employer to train and instruct personnel to be in a safe place when throwing or propelling the charge; lowering the charge by rope, cord, or pole; or hand placing the charge on or in the snow. Also, it will require that when hand placing the charge, the crewman will be belayed (assisted) from behind by another crewmember. These proposed revisions are necessary to recognize that it may be necessary to lower the charge by rope or pole to the designated blast area because of extreme slope or other condition where the danger exists that the charge could slide past the designated blast area, and to permit the hand placement of the charge provided a second person is

## Initial Statement of Reasons Explosives Reorganization

available to belay, "assist", the person from behind. Therefore, these proposed revisions are necessary to be consistent with accepted snow avalanche blasting industry practices and have proven to be safe methods for placing explosive charges to initiate an avalanche.

### Section 5358. Misfires--Snow Avalanche Blasting.

The preamble to the requirements of existing Section 5358 states that when a misfire occurs, a minimum 15-minute wait is required before approaching the site where the charge is located. The regulation then gives three alternatives that can be accomplished to make the site safe.

In addition to proposed renumbering, it is proposed to revise Section 5358 to delete the preamble and to include a new subsection (a) that requires the slope to be closed and at least a 60-minute delay before approaching the site where a suspected misfire occurs. This proposal, as recommended by the advisory committee, is necessary to be consistent with the requirements exercised by other states and federal enforcement authorities such as the U.S. Forest Service regarding the accepted time delay.

#### Subsection (b).

Existing subsection (b), proposed subsection (a)(2), permits the placing of a charge alongside the misfire and relighting it.

It is proposed to revise subsection (a)(2) to substitute the term "detonate" in place of the phrase "relight it". This proposal is necessary to clearly indicate that the purpose of the second charge is to detonate/eliminate the misfire.

#### Subsection (d).

Existing subsection (d), proposed subsection (b), permits the marking of the charge location and instituting a search where the recommended conditions are not possible due to terrain or weather conditions.

In addition to the proposed revisions to reflect the renumbering of existing subsections (a) through (c) and an editorial correction, a revision is proposed to indicate this course of action may be taken if it is not "immediately" possible to institute procedures to neutralize the misfire. This proposal is necessary to provide the employer an alternative to immediately eliminate the misfire. This proposal emphasizes that where possible, all misfires are to be eliminated when they occur, but recognizes that this cannot always be accomplished.

## **Article 122. Ammonium Nitrate Storage.**

### Section 5359. Scope.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (a).

Existing subsection (a) contains a statement relating to the types of entities and owners or lessee of buildings, etc. and the baseline quantity of ammonium nitrate affected by the regulations. Also, the regulation addresses the necessity to consider fire and explosion hazards when approving the storage of large quantities of ammonium nitrate. A “NOTE” is included describing the hazards of ammonium nitrate.

It is proposed to revise subsection (a) to delete the specific references to the types of entities and owners or lessee of buildings, etc. and to delete the statement regarding the necessary approval of large quantity storage to clarify the scope/application statement. The Labor Code is specific that all employers in California are required to provide a safe and healthful work environment. Therefore, the specific references to persons, firms and others are unnecessarily redundant and therefore, proposed for repeal. The information in the approval statement is not in the purview of the Division. Although occupational safety and health of employees would be affected by the release of toxic vapors from burning or decomposing ammonium nitrate, the immediate concerns revolve around the effects on the general public at large. For this reason, enforcement of this issue falls within the jurisdiction of the local fire marshal and other local emergency response organizations, and therefore, is proposed for repeal.

In addition, the “NOTE” to subsection (a) informing the reader of the potential blast effects of ammonium nitrate and the cross-reference to Section 5360 is proposed for repeal as it is informational only. In addition, similar language contained in this NOTE is proposed in the NOTE to TABLE EX-2 following Section 5252. Therefore, this NOTE is not necessary.

Subsection (b).

Existing subsection (b) states that except as provided in (c), this section applies to the storage of ammonium nitrate in various forms.

It is proposed to revise subsection (b) to include the word "subsection" before the reference to "(c)" to maintain a format consistent with that which exists in Title 8.

Subsection (c).

Existing subsection (c) prohibits the storage of ammonium nitrate and ammonium nitrate mixtures that are more sensitive than allowed by definition and test procedures for ammonium nitrate fertilizer.

It is proposed to revise subsection (c) to include the source “Fertilizer Institute’s publication”, the publication date “dated August 1984”, and the page numbers “pages 1 - 12” for the referenced publication “Definition and Test Procedures for Ammonium Nitrate Fertilizer”. This proposal is necessary to clearly inform the affect regulated

Initial Statement of Reasons  
Explosives Reorganization

public the source of the regulation. In addition, it is proposed to address this document as a document incorporated by reference. This proposal is necessary to require the employer to refer to this publication to determine the storage requirements of ammonium nitrate and ammonium nitrate mixtures that are more sensitive.

It is proposed to revise subsection (c) to permit these products to be stored in accordance with Table EX-1 of Section 5252, the table of distances for storage of explosive materials, and to remove the phrase “not be permitted”. This proposed action is necessary to recognize the storage of the referenced mixtures does not create a hazard when the appropriate distances are maintained and to be consistent with industry practice to use the explosive materials table for this type of storage.

Existing subsection (c) contains two “NOTES” relating to industry publications.

Existing “NOTE 1” to subsection (c) contains the mailing address for the Fertilizer Institute.

It is proposed to revise the “NOTE 1” to subsection (c) to list the correct mailing address for the publisher of this publication.

Existing “NOTE 2” to subsection (c) lists another source of information regarding ammonium nitrate entitled “Specifications, Properties, and Recommendations for Packaging, Transportation, Storage, and Use”, available from the Compressed Gas Association.

It is proposed to repeal the information in “NOTE 2”. This organization's publication addresses Nitrous Oxide Grade. This publication is no longer in print. Therefore, the information in “NOTE 2” is no longer applicable and therefore, is unnecessary.

Subsection (d).

Existing subsection (d) is a general statement regarding the application of this Article to the production and storage of ammonium nitrate on the premises of the producing plant when there is no distinct hazard to employees. Included in this regulation are references to Title 24 and Title 8, Section 5359.

It is proposed to repeal the statement in subsection (d) as its contents relate to the production and storage of ammonium nitrate, with storage being in conjunction with production. This information, although relative to manufacturing, does not affect the use of ammonium nitrate as an explosive material. Therefore, the statement in subsection (d) is unnecessary. As a result of this proposal, it is proposed to delete the references to Title 24 and Title 8, Section 5359 as these references are obsolete references and no longer applicable.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5359.)**

Initial Statement of Reasons  
Explosives Reorganization

Section 5360. Storage.

Existing Section 5360 contains general requirements for the storage of ammonium nitrate with specifications for walls, separation areas and distances, provisions against storage and use of flammable and combustible liquids except when these fluids are stored in conformance with Section 5417 and other requirements.

Subsections (a) and (a)(1).

Existing subsection (a) provides that in lieu of separation walls, ammonium nitrate may be separated from materials that are reactive when combined with ammonium nitrate by a space of at least 30 feet and, if necessary, sills or curbs shall be provided to prevent mixing during fire conditions. Included in the regulation is a list of "contaminating substances."

It is proposed to revise subsection (a) to delete the list of "contaminating substances" as this list is informational only and therefore, unnecessary.

It is proposed to delete the reference number to subsection (a)(1) and include its provisions as subsection (a). This proposal is necessary as the provisions of subsection (a)(1) are directly related to the provisions of subsection (a) and should be included in subsection (a). Also, it is proposed to replace the word "the" immediately following the phrase "may be separated from" with the word "these". This proposal is necessary to editorially correct the sentence. It is proposed to delete the reference to "referred to in (a)" as this reference is unnecessary. In addition, it is proposed to delete the phrase "during fire conditions" as this statement is unclear.

Subsection (b).

Existing subsection (b) requires that storage of flammable and combustible liquids on the premises comply with the requirements of Section 5417.

It is proposed to revise subsection (b) to substitute references to "Articles 135 and 141" in place of the reference to "Section 5417". This proposal is necessary as other regulations regarding the storage of flammable and combustible liquids within Articles 135 and 141 may be applicable. The inclusion of the references to Articles 135 and 141 is necessary to alert the employer/user of the probability of other regulations to be adhered to.

In addition, it is proposed to delete the reference to "or (a)(1)" as this reference no longer applies as the result of the proposed revisions to existing subsection (a), and to delete the word "above" as it is unnecessary. This proposal is necessary to eliminate unnecessary language.

Subsection (c).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (c) permits the storage of sulfur and finely divided metals in the same building as ammonium nitrate when the provisions of Group 18 have been met.

It is proposed to revise subsection (c), including a minor editorial revision, to substitute a reference to “Section 5360(a)” in place of the reference to “of this Group 18”. This proposal is necessary to clarify the intent of the regulation by more appropriately addressing the specific subsection within Section 5360 that pertains to the storage requirements for ammonium nitrate.

Subsection (d)

Existing subsection (d) prohibits the storage of blasting agents in the same building as ammonium nitrate unless it is on the premises of makers, distributors and user-compounders.

It is proposed to revise subsection (d) to substitute the term “explosive materials” in place of the phrase “explosives and blasting agents” to be consistent with terminology commonly used in the explosives industry.

Subsection (e).

Existing subsection (e) prohibits the storage of Liquefied Petroleum Gas except when the storage conforms to the provisions of the Unfired Pressure Vessel Safety Orders.

It is proposed to repeal the provisions of subsection (e) as these requirements duplicate the provisions of Section 5360(a) and the Division already enforces the Pressure Vessel Safety Orders. The reference to the Unfired Pressure Vessel Safety Orders is unnecessary as the employer must obtain a permit from the Division’s Pressure Vessel Unit prior to locating any LPG storage containers. Therefore, the provisions of subsection (e) are unnecessary.

Subsection (f).

Existing subsection (f), proposed subsection (e), prohibits the storage of more than 2,500 tons of bagged ammonium nitrate in a building not having sprinkler protection. Sprinkler protection may be required for the storage of lesser quantities when the location of the building or presence of other stored materials may present a special hazard.

It is proposed to editorially revise the first sentence of subsection (e) by restating the existing language to prohibit quantities of 2,500 tons or more of bagged ammonium to be stored in buildings or structures unless equipped with automatic sprinkler systems. This proposal is necessary to clarify the intent of the regulation.

It is proposed to revise the remainder of subsection (e) to remove the word “may” as it appears twice in the regulation as it is permissive and in its place include the word “shall”

Initial Statement of Reasons  
Explosives Reorganization

to require sprinkler protection when the quantity of ammonium nitrate is less than 2,500 tons. In addition, it is proposed to include the phrase “fire or detonation hazard” in place of the phrase “special hazard” to specifically identify the types of hazard. This proposal is necessary to require sprinkler protection when the quantity is less than 2,500 tons and there is a fire or detonation hazard to be consistent with local fire codes.

Subsection (f)(1).

Existing subsection (f)(1), proposed subsection (f), requires that suitable fire control devices such as fire hoses or portable fire extinguishers complying with Article 157 and/or Article 158 is to be provided throughout the warehouse, in loading and unloading areas. It also references Title 24, Part 6, Title 8, Section 5360.

It is proposed to revise subsection (f) to delete the references to the types of fire extinguishers or fire control systems to be provided as these examples are unnecessary. Also, it is proposed to revise subsection (f) to include the phrase “loading dock areas” in place of the phrase “loading and unloading areas” as the phrase “loading dock” is the industry term for “loading or unloading area”. This proposal is necessary to provide language that is consistent with terminology commonly used in the explosives industry.

In addition, it is proposed to reformat the existing provisions of subsection (f) to delete the last sentence that states “Suitable fire control devices shall comply with the requirements of Article 157 and/or Article 158” and to include the references to “Articles 157 and/or 158” to follow the phrase “Suitable fire control devices” in the first sentence. This proposal is necessary to eliminate extraneous language.

In addition, it is proposed to delete the references to Title 24, Part 6 and Title 8, Section 5360 as the references to Part 6 of Title 24 and Title 8, Section 5360 are obsolete references and no longer applicable. Therefore, these references are unnecessary.

Subsection (g).

Existing subsection (g) requires that electrical installations comply with the California Electrical Safety Orders for ordinary location and be designed to minimize damage from corrosion. It also references Title 24, Part 6, Title 8, Section 5360(a) and (g).

It is proposed to repeal the provisions of subsection (g) as employers are already required to comply with the provisions of the Electrical Safety Orders in Title 8. It is the responsibility of the employer/user to comply with all applicable safety orders in Title 8. Therefore, the provisions of subsection (g) are unnecessary.

In addition, it is proposed to delete the references to Part 6 of Title 24 and Title 8, Section 5360(a) and (g) as these references are obsolete references and no longer applicable. These references are unnecessary as the local fire authorities or the State Fire Marshal already enforces these regulations.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to include new language in subsection (g) that states “Where required by local fire authorities or the State Fire Marshal, lightening strike protection shall be provided”. This proposal is necessary to protect the magazine from lightning strike depending on the location and surrounding conditions because the danger from lightening is considerably increased if there is a transmission line, water line, compressed air line, fences, stream, or other conductors available to carry the current between the storm and magazine location..

### Section 5361. Structures.

#### Subsection (a).

Existing subsection (a) prohibits storage buildings from having basements unless the basements are open on at least one side.

It is proposed to repeal the provisions of subsection (a) as this regulation would permit the storage of ammonium nitrate in a basement if the basement is open on at least one side. However, this language is not clear on which side of the basement is considered open and whether this opening would provide adequate ventilation and convenient access of materials and employees. If ammonium nitrate is stored at ground level and a fire should occur, this regulation does not prevent melted ammonium nitrate from flowing into the basement that would increase the hazards of explosions. If ammonium nitrate is stored in a basement, below ground storage could result in an accumulation or exposure to moisture that could result in the deterioration of ammonium nitrate. If a fire should occur, basement storage containing ammonium nitrate has a higher explosion hazard because poor ventilation in a basement could enhance pressure accumulation resulting in an explosion.

As a result of these possible hazardous conditions, it is proposed to include new language in subsection (a) to require that ammonium nitrate storage buildings shall be one-story buildings only without basements. This proposal is necessary to ensure only single-story buildings without basements are used for the storage of ammonium nitrate, a practice currently used in the industry.

#### Subsection (b).

Existing subsection (b) requires storage buildings to have adequate ventilation or be constructed with self-ventilating capabilities in the event of fire.

It is proposed to revise subsection (b) to substitute the phrase “capable of adequate ventilation” in place of the phrase “be of a construction that will be self-ventilating” to require that the building be capable of adequate ventilation in the event of fire. It is proposed to delete the phrase “be of a construction” as this language is unnecessary. What does the term "self-ventilating" mean? The advisory committee determined that natural convection was implied but the terminology really does not convey this intent. Therefore, this proposal is necessary to clarify the intent of the regulation.



Initial Statement of Reasons  
Explosives Reorganization

The proposed provisions of this regulation are currently contained in existing Section 5363(b). As a result, existing Section 5363(b) is proposed for deletion to eliminate duplicative regulations in the GISO.

Subsection (e).

Existing subsection (e) requires buildings and structures to be dry and free from water seepage through the roof, walls and floors. Immediately following subsection (e) are references to Title 24 and Title 8, Section 5361.

It is proposed to delete the references to Title 24 and Title 8, Section 5361 as these references are obsolete references and no longer applicable. Therefore, the reference to Title 24 and the corresponding reference to Title 8 are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5361.)**

Section 5362. Container Storage.

Subsection (a).

Existing subsection (a) requires that bags and containers used for ammonium nitrate must comply with specifications and standards required for interstate commerce. A "NOTE" permits the use of non-conforming containers in the manufacturing or processing processes.

It is proposed to revise subsection (a) to substitute the word "shall" in place of the word "must" to provide language consistent with terminology used in Title 8.

The existing "NOTE" to subsection (a) is proposed to be re-designated as an "EXCEPTION" and proposed for transfer to immediately follow subsection (b). This proposal is necessary as the existing language in the "NOTE" is an exception and should be included to follow subsection (b), the more appropriate location in Section 5362. In addition, the proposed "EXCEPTION" for manufacturing sites is necessary to recognize that the manufacture of ammonium nitrate naturally requires temperatures above 130 degrees Fahrenheit.

Subsection (b).

Existing subsection (b) prohibits the storage of ammonium nitrate in containers when the ammonium nitrate exceeds 130 degrees Fahrenheit.

The "NOTE" following subsection (a) that permits the use of non-conforming containers in the manufacturing or processing processes is proposed for transfer to follow subsection (b) as an "EXCEPTION" statement to address both subsections (a) and (b). This

Initial Statement of Reasons  
Explosives Reorganization

proposal to include the exception for manufacturing processes is necessary as it is not necessary to have the same bag and container specifications for manufacturing sites. Also, the normal process of ammonium nitrate manufacture will result in temperatures over 130 degrees Fahrenheit.

Subsection (d).

Existing subsection (d) addresses the height and length of storage piles and the limitations imposed when stored in a non-sprinkled or combustible building.

It is proposed to revise subsection (d) to substitute language to indicate the regulation is addressing “stacked bags” in place of the word “bags” as this regulation is addressing the storage of bagged ammonium nitrate. This proposal is necessary to eliminate an implication that the regulation applies to bulk storage. Bulk storage is addressed in Section 5363.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5362.)**

Section 5363. Bulk Storage.

Subsection (b).

Existing subsection (b) requires warehouses to have adequate ventilation or be capable of adequate ventilation in case of fire.

It is proposed to transfer the provisions of subsection (b) to proposed subsection (b) of Section 5361 relating to structures, a more appropriate location in the GISO.

Subsection (d).

Existing subsection (d), proposed subsection (c) requires that bins are clean and free of materials that may contaminate ammonium nitrate.

It is proposed to revise subsection (c) to delete the reference to the phrase “clean and” as it does not clearly convey the intent of the regulation and therefore, is unnecessary. What would a clean bin consist of? The intent of the regulation is to ensure the ammonium nitrate is not contaminated with materials that could cause instability and/or fire.

Subsection (e).

Existing subsection (e), proposed subsection (d), contains a “NOTE” that addresses the special coatings that may be put on wood or steel to protect the material from corrosion. Included in this “NOTE” is a reference to sodium silicate.

Initial Statement of Reasons  
Explosives Reorganization

It is proposed to revise the “NOTE” to subsection (d) to include a common term "(water glass)" to clarify the term “sodium silicate”.

Subsection (f).

Existing subsection (f), proposed subsection (e), requires that partitions dividing the storage of ammonium nitrate from the storage of other products that could contaminate the ammonium nitrate shall be of tight construction.

It is proposed to revise subsection (e) to include an explanatory statement at the end of this regulation that this requirement is “to eliminate cracks or crevices”. This proposal is necessary to clarify the purpose for the expression or term “tight construction”.

Subsection (i).

Existing subsection (i), proposed subsection (h), addresses the height or depth of piles limited by the pressure-setting tendency of the product. The regulation further prohibits ammonium nitrate be piled higher at any point than 36 inches below the roof or supporting and spreader beams overhead. Included in this regulation is a “NOTE” that explains pressure-setting. The term "pressure-setting" appears both in the regulation and in the “NOTE”.

It is proposed to revise subsection (h) to include the term "(caking)" to identify the process addressed by the term "pressure-setting".

Subsection (j).

Existing subsection (j), proposed subsection (i), prohibits ammonium nitrate from being accepted for storage when the temperature of the product exceeds 130 degrees Fahrenheit.

It is proposed to revise subsection (i) to include an “EXCEPTION” to the 130 degree Fahrenheit limit for the storage of ammonium nitrate for manufacturing or processing. This proposal is necessary as manufacturing or processing temperatures may exceed 130 degrees Fahrenheit and the product may need to be stored for "shipment" or additional process within the plant or processing facility prior to cooling.

Subsection (k).

Existing subsection (k), proposed subsection (j), prohibits the use of dynamite or other explosives and blasting agents to break up or loosen caked ammonium nitrate. Included in this regulation are references to Title 24 and Title 8, Section 5363(a), (b), (c), (d), and (e).

It is proposed to revise subsection (j) to delete the reference to the term "Dynamite" and to substitute the term "explosive materials" in place of the phrase "explosives and

Initial Statement of Reasons  
Explosives Reorganization

blasting agents" to be consistent with industry terminology and to include a reference to the phrase "bagged or bulk" following the word "loosen" to clarify the intent of the regulation.

It is proposed to repeal the references to Title 24 and Title 8, Section 5363(a), (b), (c), (d), and (e) as these references are obsolete references and no longer applicable.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5363.)**

**Article 123. Small Arms Ammunition and Primers, and Smokeless and Black Powder Propellants**

The existing title to Article 123 includes a reference to small arms ammunition and primers, smokeless and black powder propellants.

It is proposed to revise the title of Article 123 to include the phrase "Small Arms Ammunition" prior to the term "Primers" to read "Small Arms Ammunition and Small Arms Ammunition Primers, and Smokeless and Black Powder Propellants". This proposal is necessary to clarify the intent of the Article.

**Section 5370. Scope.**

Existing Section 5370 addresses the scope of the Article and makes reference to small arms ammunition, small arms primers, smokeless propellants, and black powder propellants. Included in this regulation are references to Title 24, Title 8, Section 5370.

It is proposed to revise Section 5370 to include the term "ammunition" prior to the term "primers". This proposal is necessary to clarify the intent that the term "primer" in this Article applies only to small arms ammunition primers.

In addition, it is proposed to delete the references to Title 24 and Title 8, Section 5370 as these references are obsolete references and no longer applicable. Where a fire safety issue is present, the local fire agencies and/or the State Fire Marshal having the authority will require the necessary provisions to be accomplished. Therefore, the reference to Title 24 and the corresponding reference to Title 8 are unnecessary.

**Section 5371. Small Arms Ammunition.**

**Subsections (a).**

Existing subsection (a) states that no restrictions are imposed on truck or rail transportation of small arms ammunition other than those that are imposed by the U.S. Department of Transportation or by the presence of other hazardous materials.

## Initial Statement of Reasons Explosives Reorganization

It is proposed to repeal the language in subsection (a) as it informational only and therefore, is unnecessary.

### Subsection (b).

Existing subsection (b) further states that no quantity limitations are to be imposed on the storage of small arms ammunitions in warehouses, retail stores and other general occupancies except those imposed by limitations of storage facilities and consistent with employee safety.

It is proposed to repeal the language in subsection (b) as this statement is vague. Also, the fact that other entities such as ATF and the State Fire Marshal enforce the storage of small arms ammunition render this section unnecessary.

### Subsection (c).

Existing subsection (c), proposed subsection (a), permits a clear distance of 50 feet when storing small arms ammunition not separated by a fire-resistive wall of one-hour rating.

It is proposed to revise subsection (a) to substitute the term “fire-resistant” in place of the term “fire-resistive”. This proposal is necessary to editorially correct terminology. In addition, it is proposed to substitute the “25 feet” clearance distance in place of the existing “50 feet” clearance distance. This proposal is necessary to be consistent with the ATF distance requirements.

### Subsection (d).

Existing subsection (d), proposed subsection (b), prohibits the storage of small arms ammunition with Class A or B explosives. Included in this regulation are references to Title 24 and Title 8, Section 5371(c).

In addition to substituting the term "high explosives" in place of the phrase “ Class A or Class B explosives” to be consistent with language commonly used in the explosives industry, it is proposed to revise subsection (b) to delete the phrase "for this latter storage" as this language is unnecessary. The existing Class A and Class B references to explosives are proposed to be substituted with the explosive “Type”. This proposal is necessary as it clarifies the intent of the regulation.

It is proposed to repeal the references to Title 24 and Title 8, Section 5371(c) as these references are obsolete references and no longer applicable. Where a fire safety issue is present, the local fire agencies and/or the State Fire Marshal having the authority will require the necessary provisions to be accomplished. Therefore, the reference to Title 24 and the corresponding reference to Title 8 are unnecessary.

### Section 5372. Smokeless Propellants.

Initial Statement of Reasons  
Explosives Reorganization

Subsections (a) and (b).

Existing subsection (a) requires that all smokeless propellants are to be stored in shipping containers. Existing subsection (b) contains the requirements for the storage of smokeless propellants in other types of containers.

It is proposed to revise subsection (a) to include an exception in subsection (a) to recognize the alternatives in subsection (b). This proposal is necessary to include an exception to permit the storage of smokeless propellants in other than shipping containers. This situation can occur at dealer locations where stock is removed from the shipping containers for display or limited distribution/consumer packaging.

Subsection (b)(1).

Existing subsection (b)(1) requires quantities of smokeless propellants between 20 and 100 pounds to be stored in portable wooded boxes having walls at least one inch thick.

It is proposed to revise subsection (b)(1) to substitute “110 pounds” in place of “100 pounds” as the maximum amount to be stored in a portable wooden box. This proposal is necessary to accommodate the manufacturer’s packaging system that has changed from the pound system to the metric system.

Subsection (b)(2).

Existing subsection (b)(2) requires that smokeless propellants in quantities over 100 but less than 800 hundred pounds be stored in non-portable storage cabinets having one inch thick wood walls.

It is proposed to revise subsection (b)(2) to reduce the maximum quantity permitted for this type of storage from 800 to 750 pounds and to permit the use of non-sparking material having the equivalent strength of the specified construction materials. This proposal is necessary to be consistent with the ATF regulations, the lead agency for the storage of explosive materials and to permit the employer/user to use materials having the same non-sparking characteristics and strength as wood for storage cabinets.

Subsection (c).

Existing subsection (c) requires that commercial stocks in excess of 800 pounds, but less than 5,000 pounds, may be stored in a building if certain requirements are met. The regulation then lists 7 separate or related items to be complied with.

It is proposed to revise subsection (c) to reduce the minimum quantity of explosive materials storage from 800 to 750 pounds and to include the phrase “all of” to precede the phrase “the following requirements are met:” to clearly indicate that the employer is to comply with all of the listed requirements. These proposed revisions are necessary to be

## Initial Statement of Reasons Explosives Reorganization

consistent with the ATF regulations that require the employer to comply with all of the 7 conditions when storing 750 pounds or more of smokeless propellants.

### Subsection (c)(5)(C).

Existing subsection (c)(5)(C) states that barricades between cabinets are to be constructed of boiler plate at least ¼-inch thick, or of equivalent materials.

It is proposed to revise subsection (c)(5)(C) to substitute the term "steel" in place of the phrase "of boiler" as the term "boiler plate" is not commonly used as when these regulations were first promulgated. As a result, the term "boiler plate" may be unclear and a clearer term "steel plate" is proposed to be consistent with terminology commonly used in the explosives industry.

### Subsection (c)(7).

Existing subsection (c)(7) requires that the building be equipped with an automatic sprinkler system installed in compliance with a specific NFPA standard regarding the installation of sprinkler systems.

It is proposed to revise subsection (c)(7) to delete the specific reference to the NFPA standard and to substitute a reference to Article 159. This proposal is necessary as the reference to Article 159 of the GISO iterates the requirements contained in the NFPA No. 13.

### Subsection (d).

Existing subsection (d) requires that smokeless powder not stored in accordance with (b), (c) and (d), whichever applies, is to be stored in a magazine as required by Article 114. Included in this subsection are references to Title 24, Title 8, Section 5372(d) and (e).

It is proposed to revise subsection (d) to include the word "subsections" prior to the reference to (c) to be consistent with the format of Title 8 and to delete the reference to "(d) of this Section" as subsection (d) does not contain references or requirements for the storage of smokeless propellants and the phrase "of this Section" is unnecessary language.

In addition, it is proposed to repeal the references to Title 24 and Title 8, Section 5372(d) and (e) as these references are obsolete references and no longer applicable. Where a fire safety issue is present, the local fire agencies and/or the State Fire Marshal having the authority will require the necessary provisions to be accomplished. Therefore, the reference to Title 24 and the corresponding reference to Title 8 are unnecessary.

## Section 5373. Black Powder Propellants.

### Subsection (b).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) prohibits the display of more than one pound of black powder propellant in commercial establishments.

It is proposed to repeal the provision of subsection (b) as this requirement is enforced by local and federal agencies. The ATF and local authorities regulate the amount of commercial stocks of black powder propellant that may be displayed in commercial establishments.

Subsection (c).

Existing subsection (c) prohibits the storage, in commercial buildings, of black powder propellant in quantities of more than 50 pounds.

It is proposed to repeal the provision of subsection (c) as existing subsection (d), proposed subsection (b), of this Section already prohibits the storage of over 50 pounds of black powder propellant unless it is in a Type 1 or Type 2 outdoor magazine.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 5373.)**

Section 5374. Small Arms Ammunition Primers.

Subsection (d).

Existing subsection (d) contains eight requirements that are to be complied with when storing quantities in excess of 750,000 small arms ammunition primers in a building.

It is proposed to revise subsection (d) to include the phrase "all of" before the phrase "the following" to clearly indicate that all of the following conditions must be met if quantities in excess of 750,000 small arms ammunition primers are to be stored in a building. This proposal is necessary to ensure the reader clearly understands that all the conditions are to be complied with.

Subsection (d)(6).

Existing subsection (d)(6) permits the separation distance between cabinets be reduced by a specified amount when using barricades provided the barricades are twice the height of the cabinets. The regulation specifies partitioning and construction materials.

It is proposed to revise subsection (d)(6) to substitute the term "steel" plate in place of the term "boiler" plate. This proposal is necessary to delete an obsolete term with a familiar term readily understood in the explosives industry.

Subsection (e).



Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (e) requires commercial stocks of small arms ammunition primers not in the original shipping containers be stored in a magazine constructed as specified in Article 114.

Included in this regulation are references to Title 24 and Title 8, Section 5374.

It is proposed to delete the references to Title 24 and Title 8, Section 5374 as these references are obsolete references and no longer applicable.

## **Subchapter 17. Mine Safety Orders.**

It is proposed to either repeal or transfer the explosive regulations from the Mine Safety Orders (MSO) to Group 18 of the General Industry Safety Orders (GISO). Those explosive regulations in the MSO that are proposed for repeal are either obsolete requirements or already exist within the GISO and the California Occupational Safety and Health Regulations (i.e. Sections 344.20, 344.21, and 344.22). The proposal to eliminate obsolete requirements is necessary to remove regulations that are no longer applicable. The proposal to eliminate duplicative regulations is necessary to remove duplication of requirements. Because the requirements already exist in the GISO, the regulations necessary to maintain a safe and healthful work site will still be in effect.

Those explosive regulations in the MSO that are proposed for transfer into the GISO are those that are unique to the mining industry that presently do not exist in the GISO or are proposed for transfer to clarify the existing GISO requirements. This proposal is necessary to consolidate the explosive regulations into one location in the GISO, making it more convenient for the user.

### **Article 1. Definitions.**

#### **Section 6958. Definitions.**

Existing Section 6958 contains definitions of terms used within the MSO regulations to ensure the devices and/or processes addressed within the regulations are clearly defined and understood.

#### **Subsection (a).**

Existing subsection (a) states that the following definitions shall apply in the application of these Orders. It also states that the singular number includes the plural, and the plural includes the singular.

It is proposed to delete the latter part of subsection (a) that states the singular number includes the plural, and the plural includes the singular. This proposal is necessary to delete obsolete language that is no longer applicable and therefore, unnecessary.

In addition, it is proposed to remove the existing numbering system of the definition sections of the MSO following subsection (a). This proposal is necessary to be consistent with the format of the definition sections of the CSO and the TSO.

It is proposed to repeal, transfer, and transfer and editorially revise some of the definitions of Section 6958 to Section 5237 of the GISO, the definition section. The definitions that are proposed for repeal either already exist in the GISO and therefore, eliminate duplicative definitions or reflect obsolete industry practices, technology, terminology, or classification of materials and therefore, are no longer necessary. The

## Initial Statement of Reasons Explosives Reorganization

definitions that are proposed for transfer to the GISO are either transferred verbatim or transferred and editorially revised for clarity to reflect changing industry practices, technology, terminology, or classification of materials.

The following definitions are proposed for **repeal**: ANFO; Barricade-Artificial; Barricade-Natural; Barricaded; Blaster; Blast Area; Blasting Accessories; Blasting Agent; Blasting Cap (the term “Blasting Cap” already exists in the GISO; however, the definition is proposed for transfer under the term “Detonator”); Blasting Circuit; Blasting Machine; Blasting Mat; Blasting Operation; Blasting Shelter; Bullet Resistant; Cap Crimper; Capped Fuse; Chlorate Explosives (the term “Chlorate Explosives” already exists in the GISO; however, the definition is proposed for transfer under the term “Explosive Materials” as “Explosives, Chlorate”); Connecting Wires; Coyote Hole; Detonator Cord; Detonator; DOD; Electric Blasting Cap (the term “Electric Blasting Cap” already exists in the GISO; however, the definition is proposed for transfer under the term “Detonator”); Explosives; Explosives, Class A (obsolete classification); Explosives, Class B (obsolete classification); Explosives, Class C (obsolete classification); Fuse, Safety; Igniter Cord; Inhibited Building; Leading Wires; Note: The loading hose and loading tube may be constructed in one piece; Misfire; Missed Hole; Nitro-Carbo-Nitrate (obsolete terminology); Primary Blasting; Primer; Safety Fuse (the term “Safety Fuse” already exists in the GISO as “Fuse, Safety”); Secondary Blasting; Slurry Explosives; Springing; Squib Electric; Stemming Material; USDOT; and, Water Gels, Slurry Explosives and (A) and (B).

The following definitions are proposed for **transfer** to Section 5237 of the GISO: Air Loader (editorially revised for clarity); Air Supply Lines; Loading Hose (editorially revised for clarity); Loading Line; Loading Tube (editorially revised for clarity); Mudcapping; Permanent Leading Wires [transferred to the GISO and editorially revised for clarity under the term “Permanent Blasting (Leading) Wires”]; and, Static Dissipating (editorially revised for clarity).

### **Article 50. Explosives.**

The heading “GENERAL” is proposed for repeal as it is no longer applicable as a result of this proposal and therefore, is unnecessary.

### **Section 7200. Minors.**

Existing subsections (a) and (b) prohibit any person under the age of 18 to be involved with any activity relating to the storage, use, handling, and transportation of explosives. Any person between the age of 18 and 21 may be involved in any activity relating to the storage, use, handling, and transportation of explosive materials provided they are under the direct personal supervision of a competent person.

Subsections (a) and (b) are proposed for repeal as these provisions are contained in existing Section 5238(a) and (b), respectively, of the GISO that is proposed for transfer to

Initial Statement of Reasons  
Explosives Reorganization

Section 5276(g) with revisions that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7200.)**

Section 7201. (6-90). Training.

Existing Section 7201 requires that all persons involved with detonators or explosives be trained in the hazards of the job. Trainees are to be under the direct supervision of a competent person.

Section 7201 is proposed for repeal as it duplicates the requirements of GISO, Section 5239 and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7201.)**

Section 7202. (6-92). Deteriorated Explosives.

Existing Section 7202 requires explosives unfit for use to be destroyed in a safe place by a competent person as set forth by the US Bureau of Mines and the Institute of Makers of Explosives or other recognized authority. Explosives are never to be buried or covered as a means of disposal.

Section 7202 is proposed for repeal as it duplicates the requirements of Section 5240(a) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7202.)**

Section 7203. Explosives for Blasting.

Existing subsection (a) prohibits the use of chlorate explosives for blasting operations.

Existing subsections (b) and (c) require that explosives are to be of a type that will not freeze at any temperature that may be reasonably expected, and that advice is to be obtained from the explosive manufacturer before using or attempting to thaw frozen explosives.

Subsections (a) and (b) are proposed for repeal as their provisions are contained in Section 5241(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

Subsection (c) is proposed for repeal as its provisions are permissive in nature and unenforceable and therefore, are unnecessary. Also, subsection (c) duplicates the requirements of existing Section 5241(c) of the GISO that is proposed for repeal and

Initial Statement of Reasons  
Explosives Reorganization

therefore, is unnecessary. Proposed Section 5240(a) of the GISO addresses the handling of frozen explosives.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7203.)**

Section 7204. Water Gels.

Existing subsection (a) requires that water gels containing explosive be manufactured, transported, stored and used as specified in this Article.

Existing subsection (b) requires that water gels without explosives but are cap sensitive, as defined under “Blasting Agent”, shall also be classified and manufactured, transported, stored, and used as specified for explosives in this Article.

Existing subsection (c) requires that water gels which are not cap sensitive, as defined by “Blasting Agent”, are to be classified as blasting agents and manufactured, transported, stored, and used as blasting agents as specified in this Article.

Subsection (a) is proposed for repeal as its provisions duplicate the requirements of proposed Section 5242(a) of the GISO. Subsection (b) is proposed for repeal as its provisions are currently contained in existing Section 5242(b) that is proposed for transfer into proposed Section 5242(a). Subsection (c) is proposed for repeal as its provisions duplicate the requirements of proposed Section 5242(b) of the GISO. Therefore, this proposal is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7204.)**

Section 7205. Black Powder Blasting.

Existing Section 7205 recommends that black powder not be used for blasting. However, the regulation delineates those persons and procedures necessary to safely use black powder for blasting operations if black powder is to be used.

Section 7205 is proposed for repeal as these provisions duplicate the requirements of Section 5243 of the GISO and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7205.)**

Section 7206. Explosives for Underground Use.

Existing Section 7206 requires explosives for underground use to meet specific criteria determined by delineated tests using a standard cartridge in a Bichel Gauge. These tests are to be conducted using the standard procedure of the U.S. Bureau of Mines. Only

Initial Statement of Reasons  
Explosives Reorganization

Fume Class 1 explosives are to be used underground. The regulation permits the use of permissible explosives under specified conditions and locations. It further states that only plant mixed blasting agents where composition control is assured are permitted for use underground.

Subsections (a) through (j) of Section 7206 are proposed for repeal as they duplicate the requirements of Sections 5244 (a) through (f) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7206.)**

Section 7207. (6-123) (6-124). Electric Detonation of Explosives During Lightning and Dust Storms.

Existing subsection (a) requires that all blasting operations using electric caps or static sensitive explosives shall be stopped when there is a lightning storm.

Existing subsection (b) requires that when there is an approaching dust storm capable of producing sufficient static electricity to detonate an electric blasting cap, all operations are to be halted. In both cases, all persons shall be withdrawn to a safe location.

Existing subsection (c) states that instrumentation to determine the presence of static electricity may be required by the Division.

Subsection (a) is proposed for repeal as its provisions are contained in proposed Section 5245(a) of the GISO and therefore, is unnecessary.

Subsection (b) is proposed for repeal as its provisions are contained in existing Section 5245(b) of the GISO that is proposed for transfer to proposed Section 5245(a) and therefore, is unnecessary.

Subsection (c) is proposed for repeal as its provisions are contained in existing Section 5245(c) of the GISO that is proposed for revision in proposed Section 5245(c) and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7207.)**

Section 7208. (6-52). Smoking and Open Flames.

Existing Section 7208 prohibits smoking and open flames within 50 feet of explosive material in the open except where permitted by these orders.

Section 7208 is proposed for repeal as its provisions duplicate the requirements of Section 5246 of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7208.)**

**Article 51. Storage of Explosives.**

**Section 7210. Storage—General Requirements.**

Existing Section 7210 contains the general requirements for the storage of explosives. The regulations require that all explosives are to be stored in a first or second class magazine except when being transported. The regulation also specifies that any quantity of explosives over 100 pounds is to be stored in a first-class magazine. An exception to this requirement is permitted for small arms ammunition and Class C explosives such as explosive power packs in the form of explosive cartridges or explosive-charged construction devices, explosive rivets and like devices. Any quantity of these devices over 50 pounds is to be stored in a magazine. The regulation prohibits the storing of blasting caps with explosives or blasting agents; contains prohibitions regarding detonating cord; requires maintaining a specified brush free distance around the magazine; specifies requirements for magazine locks and persons permitted to enter the magazine; indicates where electric power lines are to be with respect to the magazine; and requires that ammonium nitrate fuel oil blasting agents be physically separated from explosives stored in the same magazine. Care is to be taken to ensure that the oil from the blasting agent does not contaminate the explosives.

Subsections (a), (d), (e), (f), and (i) are proposed for repeal as these provisions are contained in proposed Section 5251(a), (c), (d), (e) and (e)(1), and (f) of the GISO, respectively, and therefore, are unnecessary.

Subsection (b) is proposed for repeal as its provisions are contained in existing Section 5251(b) that is proposed for transfer to proposed Section 5251(h) of the GISO. The “Exception” that follows subsection (b) is proposed for repeal as its provisions are contained in Section 5251(b)(1) and (b)(2) of the GISO. Subsection (c) is proposed for repeal as its provisions are contained in existing Section 5251(c) that is proposed for transfer to proposed Section 5251(h)(2) of the GISO. Subsection (g) is proposed for repeal as its provisions are contained in existing Section 5251(g) that is proposed for transfer to proposed Section 5251(j) of the GISO. Subsection (h) is proposed for repeal as its provisions are contained in existing Section 5251(h) that is proposed for transfer to proposed Section 5251(j) of the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

A portion of existing subsection (j) is proposed for transfer to Section 5251(g) of the GISO. This proposed transfer to prohibit explosives storage magazines to be located within specified distances of low and high voltage electrical lines is necessary as it is industry practice to maintain the 25 foot distance from low-voltage electrical lines and the 100 foot distance from overhead high-voltage electrical lines. Also, this regulation does not presently exist in the GISO.

Initial Statement of Reasons  
Explosives Reorganization

The other portion of existing subsection (j) regarding the proper placement of magazines should an electrical line break is proposed for repeal as this regulation is already contained in Section 5251(g) of the GISO and therefore, is unnecessary.

Subsection (k) is proposed for transfer to Section 5256(m) of the GISO. This proposal is necessary to ensure retention of the existing TSO regulation within the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7210.)**

Section 7211. Quantity and Distances Table for the Storage of Explosives—Class A.

Existing Section 7211 regulations and an accompanying table state the requirements for the minimum distances that a magazine with a specified quantity of blasting caps or explosives subject to mass detonation may be situated from listed topographical features. This section requires the listed distances be doubled where there is no barricade for the magazine or an inhabited building. The section further addresses situations in which there are two or more storage facilities on the same property and what is required under those conditions. The section gives equivalency of explosives for blasting caps and detonating cord.

The existing Table entitled “Quantity and Distances Table for the Storage of Explosives – Class A” lists distances when storage is barricaded. This Table is not applicable to any handling or temporary storage necessary if incidental to the transportation of explosives.

Subsections (a) through (h) of Section 7211 and the Table entitled “Quantity and Distances Table for the Storage of Explosives–Class A” are proposed for repeal as these provisions duplicate the requirements of proposed Section 5252(a); proposed TABLE EX-1; Section 5252(e), (c), (d), (b), and (a); and TABLE EX-1 of Section 5252 of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7211.)**

Section 7212. Quantity and Distance Table for Storage of Explosive—Class B Distances in Feet When Storage Is Unbarricaded.

Existing Section 7212 consists of an explanation of a Class B explosive and a table of unbarricaded distances from topographical features that specified quantities of Class B explosives are to be stored. The regulation further states that the distance is not to be reduced because of the presence of barricades or earth cover.

This section is proposed for transfer to new Section 5252.1 as “Quantity and Distance Table for Storage of Explosives - Low Explosives Distances in Feet When Storage is



Initial Statement of Reasons  
Explosives Reorganization

Unbarricaded” in the GISO. This proposed action is necessary to ensure that these regulations that are currently contained in the mining and tunneling safety orders are contained in the GISO. In addition, the DOD and ATF regulations already require the exact same requirements for many years.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7212.)**

Section 7213. First-Class Magazines.

Existing Section 7213 incorporates the provisions of Title 24, Chapter B62 and identifies it as Title 8, Section 7213. First-Class Magazines. This statement is proposed for repeal as it is unnecessary as this section no longer exists in Title 24.

Existing subsection (a) delineates what a first-class magazine may be, e.g., building, excavation, tunnel, or a portable magazine constructed as required by Section 7213.

Subsection (a) is proposed for repeal as its provisions are contained in existing Section 5254(a) of the GISO that is proposed for transfer to proposed new Section 5253.1(a)(1). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (b) requires that first-class magazines be bullet and fire resistant, weather proof, theft resistant and well ventilated.

Subsection (b) is proposed for repeal as its provisions are contained in existing Section 5254(b) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(a)(1) and (b)(1). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

An “Exception” to subsection (b) is provided that states magazines storing blasting agents and Class B and C explosives do not have to be bullet resistant. This “Exception” is proposed for repeal as its provisions are contained in existing Section 5254(b)EXCEPTION of the GISO that is proposed for transfer with revisions to Section 5253.1(d)(1) and (e)(1). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (c) requires that magazines are to be bullet resistant and be constructed of masonry, wood, metal, or a combination of these materials. Included is the minimum thickness of wall construction using the referenced materials. Also included is a statement that only tongue and grooved lumber or plywood is to be used and wood is to be covered with metal to provide fire protection.

Subsections (c)(1) through (c)(4) are proposed for repeal as their provisions are contained in existing Section 5254(c)(1) through (c)(4) of the GISO that is proposed for transfer to

Initial Statement of Reasons  
Explosives Reorganization

new Section 5253.1(a)(1). Therefore, the proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsections (c)(5) and (c)(6) regarding two layers of No. 6 Manufacturers Standard Gage or heavier steel spaced a minimum ½ inch apart and interior lines with a minimum of 2 inches of wood and two layers of wood at least 2 inch normal thickness each spaced a minimum 4 inches apart with the hollow space filled with weak cement, well tamped sand, or equivalent material are proposed for repeal as their provisions are contained in existing Section 5254(c)(5) and (c)(6) of the GISO that is proposed for transfer to new Section 5253.1(a)(1)(B)2. and new Section 5253.1(a)(1)(B)1., respectively. Subsections (c)(7) and (c)(7)(A) pertaining to wood shall be of tongue and grooved lumber or plywood are proposed for repeal as these provisions are no longer applicable and therefore, are unnecessary. Subsection (c)(7)(B) regarding wood shall be cover on the exterior side with metal to provide protection against sparks is proposed for repeal as its provisions are contained in existing Section 5254(c)(4) of the GISO. Existing Section 5254(c)(4) is proposed for transfer to proposed new Section 5253.1(a)(1)(A)3. that will address sparks and fire resistant magazines.

Proposed new Section 5253.1 of the GISO addresses the construction of walls for storage magazines. Proposed new Section 5253.1 incorporates the Bureau of Alcohol, Tobacco, and Firearms (ATF) regulations. ATF is the lead federal agency for regulating the storage of explosive materials throughout the United States. Therefore, this proposal is necessary to eliminate provisions no longer applicable and to eliminate duplicative provisions already contained in the GISO.

Existing subsection (c) contains two “NOTES”. The first “NOTE” provides a grandfather clause for portable magazines that were constructed before May 21, 1971 if certain provisions are taken to protect the magazine. The second “NOTE” states that any sheeting used shall be plywood or tongue and groove lumber. The provisions of these “NOTES” are also contained in existing Section 5254(c)(7) and (c)(7)NOTE of the GISO, respectively, that is proposed for repeal.

These “NOTES” are proposed for repeal as the ATF regulations, that are proposed for adoption as new Section 5253.1 of the GISO for the construction of explosive storage magazines, no longer are specific to this type of construction and therefore, are unnecessary. California employers will no longer have to comply with a regulation enforced only in California.

Existing subsection (d) requires the door to be bullet resistant construction and lockable with a protector such as a steel hood over the lock to minimize the possibility of tampering with the lock.

Subsection (d) is proposed for repeal as similar provisions are contained in existing Section 5254(d) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(a)(1) and (a)(1)(G). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (e) requires that the floors of the magazines are to be securely fastened and capable of withstanding the loads imposed.

Subsection (e) is proposed for repeal as similar provisions are contained in existing Section 5254(e) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(a)(1)(C). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (f) permits building type magazine walls and roofs to be made of wood covered with No. 26 U.S. Standard gauge metal. If there is a possibility that a bullet could be fired directly through the roof into the magazine, the roof construction would have to meet the requirements of subsection (c) or a four inch deep layer of sand would have to be placed on the roof, covering the entire magazine ceiling area.

Subsection (f) is proposed for repeal as its provisions are contained in existing Section 5254(f) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(a)(1)(E). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (g) addresses the requirements for ventilation to minimize dampness and the heating of stored explosives. Also, the regulation is specific in the wire mesh size and wire gauge to be used to screen the ventilation openings.

Subsection (g) and the accompanying “NOTE” referencing Pamphlet No. 1, published by the Institute of Makers of Explosives, 1965 Edition, as evidence of good practice with respect to ventilation, are proposed for repeal as their provisions are contained in existing Section 5254(g) and (g)NOTE of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(a)(1)(D), (f), and (f)NOTE. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (h) requires magazines to have a smooth finish without cracks or crevices with all nails or fasteners countersunk. It also requires that materials capable of emitting sparks shall be covered so as not to come into contact with packages of explosives.

Subsection (h) is proposed for repeal as similar provisions are contained in existing Section 5254(h) of the GISO that is proposed for transfer with revisions to proposed Section 5256 as new subsection (n). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (i) requires signs containing specific warnings and of a given color with minimum letter size to be posted at the approach to the explosive storage magazine.

Subsection (i) is proposed for repeal as similar provisions are contained in existing Section 5254(i) of the GISO that is proposed for transfer with revisions to proposed new

Initial Statement of Reasons  
Explosives Reorganization

Section 5253.1(f). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

In summary, the provisions in proposed new Section 5253.1(a) of the GISO will include Federal OSHA and Bureau of Alcohol, Tobacco, and Firearms wall construction requirements. Bureau of Alcohol, Tobacco, and Firearms is the lead federal agency regarding the storage of explosive materials. These regulations are enforced nationwide and their incorporation ensures California's regulations are consistent with the federal regulations. Therefore, this proposal is necessary to require the regulated public to provide safeguards consistent with federal mandates.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7213.)**

Section 7214. Second-Class Magazines.

Existing subsection (a) states what a second-class magazine will be and the type of materials it can be constructed of.

Existing subsection (b) requires that second-class magazines be constructed of specific dimensioned lumber, plywood, or steel over plywood or material having equal strength and fire resistance.

Existing subsection (c) requires that second-class magazines in buildings be located for easy removal in the event of a fire.

Existing subsection (d) requires the magazine be painted red and have white lettering of a specific dimension stating "EXPLOSIVES."

Existing subsection (e) requires second-class magazines containing explosives located where no one is in attendance shall be adequately secured to prevent theft.

Existing subsection (f) permits magazines that are not fire resistant when they are located more than 50 feet from combustible material.

The provisions of subsections (a) through (e) are proposed for repeal as similar provisions are contained in existing Section 5255(a) through (e) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1 (b) and (c); (b), (c), (d), and (e); (b)(1)(D); (b)(1)(E); and (b)(1)(B) of the GISO, respectively. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsection (f) is proposed for repeal as its provisions are contained in existing Section 5255(f) of the GISO that is also proposed for repeal. The provisions of subsection (f) are an exception to the fire resistant requirements. It is not industry practice to construct second-class magazines that are not fire resistant, and therefore, these provisions are unnecessary.

Initial Statement of Reasons  
Explosives Reorganization

In summary, the provisions in proposed new Section 5253.1 of the GISO will include Federal OSHA and Bureau of Alcohol, Tobacco, and Firearms wall construction requirements. Bureau of Alcohol, Tobacco, and Firearms is the lead federal agency regarding the storage of explosive materials. These regulations are enforced nationwide and their incorporation ensures California's regulations are consistent with the federal regulations. Therefore, this proposal is necessary to require the regulated public to provide safeguards consistent with federal mandates.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7214.)**

Section 7215. (6-20). Storage Within First-Class Magazines.

Existing Section 7215 requires that first-class magazines be kept clean and free of rubbish. First-class magazines are not to be used as storerooms except for equipment incidental to explosives handling. Other requirements include using specific portable lighting within the magazine; how to stack packages of explosives; using the oldest explosive first; ensuring all primers and capped fuses are used as soon as reasonably possible after making; not packing or unpacking containers of bulk explosives within 50 feet of the magazine and securely fastening the container cover before returning the container to the magazine; removing all explosives from the magazine, placing them in another magazine, and cleaning the floors before repairs to the inside of the magazine are initiated; and ensuring that where there is a possibility of sparks when working on the outside of the magazine that the explosives are removed from the magazine first.

Section 7215(a) through (i) is proposed for repeal in its entirety, as its provisions duplicate the requirements contained in Section 5256(a) through (i) of the GISO, respectively, and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7215.)**

Section 7216. Makeup or Primer House for Blasting Operations.

Existing Section 7216 states where primers are to be made up and stored; how many pounds of explosives may be stored in a makeup house; how many primers of each delay may be stored; and, permits primers to be made up in a separate building provided appropriate magazines are provided for the explosives, detonators and primers.

Subsections (a), (a)(1) through (a)(3), and (b) are proposed for repeal as their provisions are contained in proposed Section 5257(b), (b)(1) through (b)(3), and the NOTE to subsection (c) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7216.)**

Initial Statement of Reasons  
Explosives Reorganization

Section 7217. Storage of Explosives Underground.

Existing Section 7217(a) through (f) requires that: escape routes that will remain open in an emergency are provided in the event stored explosives should explode or burn; first class magazines be specific distances from underground workings, other magazines, haulage ways and fire retardant timbers; limitations on the length of storage time underground; the Hazardous Locations requirements of Part 3, Title 24 are complied with; signing is provided; and a 100-foot area clear of rubbish be maintained.

Subsections (a) through (f) are proposed for repeal as the provisions of these regulations are contained in proposed Section 5258(a) through (f) of the GISO, respectively, and therefore, are unnecessary.

Existing Section 7217(g) requires that the detonator storage magazine be of the same construction as explosive storage magazines and located at least 25 feet from a second-class magazine.

Subsection (g) is proposed for transfer to proposed Section 5258 as new subsection (g) of the GISO. The provisions regarding at least “25 feet” from a second class magazine is proposed for revision to require at least “50 feet” from a second class magazine to be consistent with the 29CFR 1926.904(f) federal requirement that permanent underground magazines containing detonators are to be stored 50 feet away from above ground magazines. Therefore, the proposed revision is necessary to be consistent with the 29CFR 1926.904(f) federal requirements for explosive materials magazines and storage.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7217.)**

**Article 52. Transportation of Explosives.**

Section 7220. General.

Existing subsection (a) exempts transportation of explosives under the jurisdiction of USDOT, the California Highway Patrol, the California Vehicle Code, or the Health and Safety Code on Public Highways.

Existing subsection (b) prohibits the transportation of explosive initiation devices with radio transmitting devices unless they have been tested and proven safe for transportation under those circumstances by a laboratory approved by the State Fire Marshal.

Existing subsection (c) prohibits the transportation of blasting caps in any vehicle carrying more than 5,000 pounds of explosives.

Initial Statement of Reasons  
Explosives Reorganization

This section is proposed for repeal as the provisions of subsections (a), (b), and (c) duplicate the requirements contained in existing subsections (a), (b), and (c) of Section 5262 of the GISO, respectively, that are proposed for revisions and explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7220.)**

Section 7221. Surface Transportation.

Existing subsection (a) requires that vehicles transporting explosives or blasting agents are to have placards with specific legends/signs of definite size and color at specified locations on the vehicle.

Existing subsection (b) prohibits the transportation of electric blasting caps and capped fuses with explosives unless they are in separate compartments, with an air gap of at least 25 inches between the compartments.

Existing subsection (c) states the vehicle is to be in good working order and the load secured, have no sparking metal in the cargo space, and additional requirements if the vehicle has an open body.

Existing subsection (d) states the vehicle is to be equipped with a 4-BC unit or equivalent Underwriter's approved fire extinguisher.

Existing subsection (e) states, unless protected from damage, containers of explosives are not to be transported with other equipment not incidental to the explosive operation. The exception is for special service trucks equipped as necessary to carry small amounts of explosives provided they are safeguarded as required by subsection (b), (c), and (d).

Existing subsection (f) requires only the driver and employees necessary for the operation of the vehicle is allowed on the vehicle carrying explosives.

Existing subsection (g) states no service or repairs using flame producing devices are to be accomplished on the vehicle while transporting explosives.

Existing subsection (h) states explosive carrying vehicles shall comply with the Quantity Distance Table when stored.

Existing subsection (i) states that the driver shall not leave the vehicle cab until the motor is stopped and the brakes are set and reasonable precautions are taken to prevent the movement of the vehicle.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (j) states that explosives shall not be left unattended during transportation. The attendant must be trained in the hazards of explosives and have an emergency plan.

Existing subsection (k) states explosives or detonators are not to be transported on locomotives.

Existing subsection (ℓ) states vehicles containing explosives or detonators shall not be taken to a repair garage or shop for any purpose.

Subsections (a), (b), (c), (d), (e), (g), (h), (i), and (k) are proposed for repeal as these provisions are already contained in the proposed revisions to Section 5262(d), (c), (f), (g), (h), (j)(1), (k), (ℓ), and Section 5266(c), respectively, and therefore, are unnecessary.

Subsection (f) is proposed for repeal as its provisions are already contained in existing Section 5263(f) of the GISO that is proposed for transfer with revisions that are explained in the GISO to proposed Section 5262(i). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (j) states that explosives shall not be left unattended during transportation and requires the attendant to be trained in the hazards of explosives and have an emergency plan.

Subsection (j) is proposed for repeal as these provisions are contained in proposed Section 5262(m), (n), and (s) of the GISO. This proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (ℓ) states that vehicles containing explosives or detonators shall not be taken to a repair garage or shop for any purpose.

Subsection (ℓ) is proposed for transfer to proposed Section 5262(k). Subsections (i), (k), and (m) are specific to the attendance of the driver of vehicle transporting explosives, ensuring the vehicle is secured and brakes set, and prohibiting flame producing equipment to be used on the vehicle. Therefore, the transfer of this regulation merely clarifies the intent of the collective requirements of subsections (i), (k), and (m) as current practices in the construction, mining, and tunneling industries. This practice or prohibition is also applicable in the general industry.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7221.)**

Section 7222. Transportation of Explosives—Underground—General.

Existing subsection (a) contains definitions for “Car”, “Train”, and “Trackless Vehicle.”



Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) states that explosives shall not be left on the station level near the shaft collar, mine or tunnel entrance, but shall be taken to the place of use or storage without delay.

Existing subsection (c) requires that detonators, capped fuses or other explosives being transported be in substantially constructed containers with tight fitting covers of materials acceptable to the Division. A “NOTE” is provided that states original cases or DOT containers are acceptable except for primers.

Existing subsection (d) states that detonators, primers, or capped fuses shall not be transported in the same container or compartment with other explosives.

Existing subsection (e) requires each primer to be transported in a partitioned, non-metallic container.

Existing subsection (f) states that explosives are not to be transported with materials or equipment other than those used in blasting.

Subsections (a), (b), (c), (c)NOTE, (d), (e), through (f) are proposed for repeal as their provisions duplicate the requirements of Section 5237 and proposed Section 5264(a), (b), (b)NOTE, (c), (d), and (e) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7222.)**

Section 7223. Transportation of Explosives—Hoisting or Lowering.

Existing subsection (a) permits only authorized persons to ride any shaft conveyance transporting explosives.

Existing subsection (b) requires that the hoist operator be notified that explosives are being transported.

Existing subsection (c) requires that the explosive be in an appropriate conveyance.

Existing subsection (d) specifies that hoisting operations in adjacent shafts be discontinued while explosives are being handled.

Subsection (a) through (c) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5265(a) through (c) of the GISO, respectively, and therefore, are unnecessary.

Subsection (d) is proposed for transfer to new Section 5265(d) of the GISO. The reference to shifts, muck, and ore refer only to the mining and tunneling industries. Therefore, the transfer of this requirement is necessary to ensure the safety and well-being of construction workers in the mining and tunneling industries.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7223.)**

Section 7224. Rail Transportation of Explosives—Underground.

Existing Section 7224(a) through (f) permits only the train crew and powder men to ride on a train transporting explosives; requires that explosives in quantities of 100 pounds or more be in special powder cars; prohibits explosives from being transported on the locomotive and requires at least one empty car be kept between the locomotive and explosive's car; requires the special powder car to be labeled; prohibits the powder car from being pushed, except when switching or on a dead end line; and requires the primers to be placed in the primer compartment of the powder car in the appropriate box and primer and powder compartments are to be separated by at least 25 inches of air space.

Subsections (a) through (f) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5266(a) through (f) of the GISO, respectively, and therefore, are unnecessary.

Existing subsection (g) permits only materials used in blasting to be transported at the same time as explosives.

Subsection (g) is proposed for repeal as the proposed revisions to Section 5264(e) of the GISO will address this prohibition, and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7224.)**

Section 7225. Transportation of Explosives—Underground—Special Trackless Vehicles.

Existing Section 7225(a) through (e) require that trackless vehicles used to transport explosives underground are truck type vehicles without dump bodies; that they are especially equipped for that purpose and maintained in compliance with Section 7221; that they are lined with nonconductive materials and equipped with closed compartments to carry the explosives; that the vehicle has signs on the sides, front and rear with specific wording and lettering size; and is equipped with a flashing red light that is visible from the front and rear.

Subsection (a) is proposed for repeal as its provisions are contained in existing Section 5267(a) of the GISO that is also proposed for repeal. The provisions of proposed Section 5267(a) and (b) are specific regarding the equipping of vehicles for the addressed purpose such as closed compartment that prevents accidental dumping. This proposal is necessary to eliminate a regulation that is contained in the provisions of proposed Section 5267(a) and (b). Therefore, existing subsection (a) is unnecessary.

Initial Statement of Reasons  
Explosives Reorganization

Subsections (b) through (e) are proposed for repeal as their provisions are contained in Section 5267(a) through (d) of the GISO, respectively, and therefore, are unnecessary.

Existing Section 7225(f) and (g) prohibit the carrying of rock, ore, or other materials not necessary for the blasting operation and permits only the vehicle operator and blaster on the vehicle.

Subsection (f) is proposed for repeal as its provisions are contained in existing Section 5267(f) of the GISO that is also proposed for repeal as proposed Section 5262(h) already contains this provision. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsection (g) is proposed for repeal as its provisions are contained in existing Section 5267(g) of the GISO that is proposed for transfer to proposed Section 5262(i). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7225.)**

Section 7226. Transportation of Explosives—Manual.

Existing Section 7226 requires that manually transported explosives be carried in suitable bags or containers. Additionally, detonators and primers are to be transported in separate bags or containers.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5268(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7206.)**

Section 7227. Transportation of Explosives—Air and Water.

Existing Section 7227 requires that aircraft and water transportation of explosives comply with federal government or equivalent standards.

Section 7227 is proposed for repeal as the information merely directs the reader to the federal regulations and therefore, is unnecessary.

**Article 53. Handling and Use of Explosives—Blasting Operations.**

Section 7230. General.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (a) requires an authorized competent person to be in charge of blasting.

Subsection (a) is proposed for repeal as its provisions are contained in proposed Section 5238(a) of the GISO and therefore, is unnecessary.

Existing subsection (b) prohibits smoking or open flames within 50 feet of any area where explosives are being handled.

Subsection (b) is proposed for repeal as its provisions are contained in Section 5276(a) of the GISO and therefore, is unnecessary.

Existing subsection (c) permits only energized power cables or sources of ignition that are necessary to the loading and firing operation to be in an area where there are loaded holes.

Subsection (c) is proposed for repeal as its provisions are contained in existing Section 5276 (c) that is also proposed for repeal. Section 5276(a) and (d) and Section 5299(e) and (g) of the GISO already contain the provisions of subsection (c) and therefore, subsection (c) is unnecessary.

Existing subsections (d), (e), (g), and (h) require that only appropriate tools be used to open explosive containers; paper cartons, sawdust and rubbish from explosives containers be removed to a safe place; all leftover explosives and initiating devices are to be returned to their proper magazines; and, blasting mats are to be used where there is the possibility of flying rock or material damaging other property.

Subsections (d), (e), (g), and (h) are proposed for repeal as their provisions are contained in Section 5276(b), (c), (e), and (f) of the GISO, respectively, and therefore, are unnecessary.

Existing subsection (f) prohibits explosives to be placed or left within 5 feet of an electric light circuit or electric power circuit except during transportation.

This provision is proposed for repeal as proposed Section 5276(d) of the GISO contains this requirement with proposed revisions that explosive materials shall not be placed within 25 feet of exposed electrical circuits except during transportation. This proposal is necessary to be consistent with industry practice to maintain at least 25 feet of clearance from all electrical circuits as any electrical circuit is a potential ignition source.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7230.)**

Section 7231. (6-100). Tamping Poles and Devices.

Existing Section 7231 requires that tamping poles are made of wood or acceptable plastic materials; the end of the tamping pole is square and of a size that will not bypass

Initial Statement of Reasons  
Explosives Reorganization

the cartridge in the hole; the wooden tamping poles have no metal parts, except for non-ferrous metal ferrules for extending the length of the pole; and plastic poles are not used unless accepted by the Division. A “NOTE” is included explaining why some plastics cannot be used for tamping poles.

Subsections (a), (b), and (c) are proposed for repeal as their provisions are contained in Section 5277(a), (b), and (c) of the GISO, respectively. Subsection (d) and the “NOTE” to subsection (d) are proposed for repeal as these provisions are contained in existing Section 5277(d) and the “NOTE” to subsection (d) of the GISO. The existing provisions of Section 5277(d) and the “NOTE” to subsection (d) are proposed for transfer with proposed revisions that are explained in the GISO to proposed Section 5277(a) and as a new “NOTE” to subsection (a). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7231.)**

Section 7232. Loading Explosives—General.

Subsections (a) through (p).

Existing subsections (a) through (p) contain the requirements necessary to perform explosives loading operations safely. The regulations address requirements concerning when loading is to commence and the condition of the bore holes; vehicular traffic; number of persons at the loading site; amount of explosives to be delivered at the site; and the minimum strength of detonators to be used. Also, the regulations require that the detonator be encased with explosives; tamping to be done with light blows, if required; holes stemmed to sufficiently confine the charge; and stacks of explosives to be spaced to prevent propagation of an explosion. The regulations specify a distance to be maintained from a charged hole when springing a hole, the sprung hole is to cool before being loaded, and drop fuses are not to be used. The regulations state that charged holes cannot be deepened; blasting is to take place as soon as possible after charging has taken place but in no case longer than 72 hours after charging; and explosives are to be separated from detonators until charging takes place. The regulations state that capped primers are to be made up at the time of charging and as close to the blast site as conditions allow; only non-sparking implements are to be used to punch holes in an explosive cartridge; and provisions are required to prevent unauthorized entry into an area containing charged holes.

Subsections (a) through (p) are proposed for repeal as their provisions are contained in Section 5278(a), (c), (d), (e), (f), (g), (h), (i), (j), (k) and (ℓ), (m), (o), (p), (q), (r), and (s) of the GISO, respectively, and therefore, are unnecessary.

Subsection (q).

Existing subsection (q) requires all detonators of a round to be of the same brand.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (q) is proposed for repeal as its provisions are contained in existing Section 5278(u) that is proposed for transfer to proposed Section 5299(j) of the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsections (r) through (t).

Existing subsections (r) through (t) require the use of a double trunkline or loop system for detonating cord blasting; trunklines in multiple row blasts are to make one or more complete loops with crossties between loops at intervals not to exceed 200 feet; and all detonating cord knots are to be tight and the connections kept at right angles to the trunklines.

Subsections (r) through (t) are proposed for repeal as their provisions are contained in Section 5278(t) through (v) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7232.)**

Section 7233. Loading and Blasting Near and Under Power Lines.

When surface blasting under or near overhead power lines, existing Section 7233 requires that leading wires be placed at right angles to power lines and anchored to prevent the circuit conductors from being thrown into the overhead lines. Additionally, the loaded holes are to be covered with a nonconductive blasting mat that is to be anchored to prevent it or other material from being blown into the overhead lines.

Section 7233(a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5279(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7233.)**

Section 7234. Pneumatic Loading of Explosives and Blasting Agents.

Existing Section 7234 contains general information that this regulation applies to all devices, appurtenances, operations, and procedures used in charging bore holes or other cavities with an explosive or blasting agent by means of compressed air. This section contains those requirements to be complied with when charging bore holes with explosives or blasting agents. The regulation gives parameters regarding use of construction material and requires the vessel that is pressurized on an air loader be designed, constructed, inspected, and stamped as meeting the requirements of the Unfired Pressure Vessel Safety Orders. There are requirements for a mesh screen, air trap or a filter to be installed on the air supply line. The air temperature is to be

## Initial Statement of Reasons Explosives Reorganization

maintained below 150 degrees Fahrenheit and there is to be a pressure relief valve set no higher than 55 pounds per square inch pressure. The equipment is to be grounded using at least #8 American Wire Gauge straps or cables connected to a ground rod. Specific resistance limits are listed. Prior to attaching the loader, the air supply line shall be blown out and the material poured into a pressure type loader shall be passed through a one-half inch opening screen. Air loaders used to place stemming shall be cleaned before and after such use.

The first paragraph of Section 7234 is proposed for repeal as this information is contained in existing Section 5280(a) which is proposed for repeal as it is informational only and therefore, unnecessary. Subsections (a), (a)(1), (a)(2), and (a)(3); (b) and (b)(1) through (4); (c) and (c)(1) through (3); (d), (d)(1) {except for the last sentence of subsection (d)(1)}, (d)(2), and (d)(3); and (e) and (e)(1) through (3) are proposed for repeal as these provisions duplicate the requirements of proposed Section 5280(a), (a)(1), (a)(2), and (a)(3); (b) and (b)(1) through (4); (c) and (c)(1) through (4); (d), and (d)(1) through (4); and (e) and (e)(1) through (3) of the GISO, respectively, and therefore, are unnecessary.

The last sentence of subsection (d)(1) which requires that pneumatic loading equipment shall not be grounded to water lines, air lines, rails, or other permanent electrical grounding systems is proposed for transfer to Section 5280(d)(3) of the GISO. This proposal is necessary because the GISO does not have regulations that are specific to the auxiliary equipment that could become energized by external sources or through static electricity. The intent of the transfer is to be consistent with the general provisions of Section 5299(a) of the GISO to mitigate the hazards of static electricity and extraneous current.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7234.)**

### Section 7235. (6-160)(6-175). Firing of Explosives.

Existing Section 7235 requires that the employer or his delegated representative determine the time of blasting. Signals are to be given and assurance that all explosives and persons are in a safe place and a safe distance or under cover before the blast is fired. Warning signals, such as horns, voice communication or flaggers, shall be given before the blast.

Subsections (a) through (d) are proposed for repeal as these provisions are contained in Section 5291(a) through (d) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7235.)**

### Section 7236. Secondary Blasting.

Initial Statement of Reasons  
Explosives Reorganization

Existing Section 7236 prohibits activity of any kind that creates a hazard to explosives during secondary blasting operations and requires the use of detonating fuse or instantaneous blasting caps when shots to be fired are in such close proximity that one shot could displace another.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5292(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7236.)**

Section 7237. Misfires.

The introductory sentence of existing Section 7237 provides information stating that misfires is the most hazardous operation associated with blasting operations.

This statement is proposed for repeal as it is informational only and therefore, is unnecessary.

Existing subsection (a) requires that the shot area be examined for misfires after each blast and, if misfires are found or suspected to exist, they will be reported to the appropriate person.

Subsection (a) is proposed for repeal as its provisions are contained in Section 5293(a) of the GISO and therefore, is unnecessary.

Existing subsection (b) requires, where possible, that the number of explosives charges in each blast is to be counted and compared to the number of explosions heard.

Subsection (b) is proposed for repeal as the phrase “Where possible” is vague, in addition to the fact that it is not possible to accurately count the number of explosions in a blast sequence. This proposed action is necessary to eliminate vague and unenforceable regulations.

Existing subsection (c) requires a 30 or 60 minute wait, depending on the type of initiating system used, if a misfire occurs. Included in the regulation are two methods by which the misfire can be neutralized or the detonator and cap sensitive explosives can be removed.

Subsection (c) is proposed for repeal as its provisions are already contained in Section 5293(b)(1) through (b)(3) of the GISO and therefore, is unnecessary.

Existing subsection (d) prohibits the drilling of blast holes if there is a danger of intersecting a charged hole of misfired explosives.



Initial Statement of Reasons  
Explosives Reorganization

Subsection (d) is proposed for repeal as its provisions are already contained in proposed Section 5293(d) of the GISO and therefore, is unnecessary.

Existing subsection (e) prohibits any other work to take place in the area during the mitigation of a misfire and states that only the necessary crew is to be on site.

Subsection (e) is proposed for transfer to Section 5293 as new subsection (c) of the GISO. The proposed transfer of this requirement for explosives suspected of burning in the hole is necessary as this condition is a greater hazard than a misfire. A burning material that has been ignited has a greater propensity to “explode” than a “shot” in which ignition never occurred.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7237.)**

Section 7240. Coyote Hole Blasting.

Existing subsection (a) prohibits electric lighting circuits within a coyote hole while it is being loaded.

Existing subsection (b) requires that the ends of lead wires be shorted until ready to blast. Also, the circuits are to be tested every 10 feet if stemming is placed in the crosscuts or before each explosive charge is placed.

Existing subsection (c) requires that when detonating cord is used, a double line of cord with cross ties is to be used so the detonating wave can reach each explosive charge from 2 independent sources.

Existing subsection (d) requires coyote holes be backfilled tightly and for sufficient length to prevent a blown out shot.

Existing subsection (e) requires the blast area to be plainly marked at specific locations when being loaded with appropriate warning signs.

Subsections (a) through (e) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5294(a) through (e) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7240.)**

Section 7241. (6-112). Use of Safety Fuse—General.

Existing subsection (a) requires the use of safety fuse for fuse cap blasting.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) requires tests to be made to determine the average burning rate for the safety fuse. The regulation is specific in the lengths of fuse to be tested and the deviation from the average burning rate that is acceptable.

Existing subsection (c) requires a notice to be prominently posted at the work site stating the fuse burning rate.

Existing subsection (d) prohibits the use of hammered or damaged fuse.

Subsections (a) through (d) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5295(a) through (d) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7241.)**

Section 7242. (6-108). Safety Fuse Storage.

Existing subsection (a) requires the safety fuse to be warmed slightly before being uncoiled when used in cold weather.

Existing subsection (b) prohibits safety fuse storage underground except when the storage area is dry and the relative humidity is less than 80%.

Existing subsection (c) prohibits safety fuse from being hung on anything that could cause a sharp bend to be formed in the fuse.

Existing subsection (d) requires fuse and igniters to be stored in a cool, dry place away from oil and grease.

Subsections (a) through (c) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5296(a) through (c) of the GISO, respectively, and therefore, are unnecessary.

The provisions of subsection (d) are proposed for transfer into Section 5296 as proposed subsection (b) of the GISO. This proposal is necessary to ensure that safety fuse is maintained in a cool location to prevent hardening of the fuse covering, thus preventing cracking which could result in poor fuse burn and also to ensure the fuse is not contaminated by oil or grease which would change the fuse burning characteristics. This proposed transfer is necessary to ensure the specificity of the mining regulation is maintained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7242.)**

Section 7243. Making Capped Fuses and Primers.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (a) requires that at least one inch of fuse be cut from the end of each coil before capping safety fuse to prevent damp fuse from being placed into the cap.

Existing subsection (b) requires blasting caps to be kept in their original or equivalent container except when they are used.

Existing subsection (c) requires only tools designed for that purpose be used for attaching the blasting cap to the safety fuse. The tool shall be readily accessible.

Existing subsection (d) requires the use of a waterproof ring type crimp or compound when necessary.

Existing subsection (e) prohibits the use of a half hitch to attach the capped fuse to the primer cartridge.

Existing subsection (f) requires that fuses be cut and capped in a safe, dry location posted as a no smoking area.

Included in existing Section 7243 are sketches showing recommended methods for attaching capped fuses to primer cartridges. There is a note following the sketches that gives further instructions on how the safety fuse is to lie when using the lacing method.

Subsections (a) through (e) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5297(a), (b), (c), (e), and (f) of the GISO, respectively, and therefore, are unnecessary.

The provisions of subsection (f) are proposed for transfer to Section 5297 as new subsection (d). The proposed action is necessary to clearly indicate that safety fuse which is an explosive material and therefore included in the general storage requirements is to be maintained free of oil or grease contamination. This proposal also ensures retention in the GISO the provisions of an existing MSO regulation.

The sketches for the Recommended Methods of Attaching Capped Fuse to Primer Cartridge and accompanying note regarding safety fuse primer are proposed for repeal as these provisions are already contained in existing Section 5297(e) of the GISO that is proposed for transfer to revised Section 5297 as a new subsection (g) with revisions that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7243.)**

Section 7244. Blasting with Safety Fuse—Hazards of Blasting with Safety Fuse.

Initial Statement of Reasons  
Explosives Reorganization

Existing Section 7244 contains a preamble describing the hazards of blasting with safety fuse.

Existing subsection (a) prohibits the igniting of safety fuse before the explosive charges are in place unless cleared by the Division.

Existing subsection (b) requires consideration be given regarding length and burning rate of fuse, condition of the escape route, and the distance to the place of safety.

Existing subsection (c) requires the safety fuse to extend at least three feet beyond the collar of the hole. The “Note” to existing subsection (c) states that a 3 foot safety fuse will fire a shot in about 2 minutes.

Existing subsection (d) permits only a single shot when using three-foot safety fuses.

Existing subsection (e) requires at least a two-minute delay between igniting the last fuse and the time the first charge explodes.

Existing subsection (f) considers the lighting of 2 or more safety fuses in a group using an igniter cord to be the same as lighting one fuse. No one employee may light more than 12 safety fuses in succession.

Existing subsection (g) prohibits entry into a blast area after the blast for at least 2 minutes when three or more safety fuses are lighted at one time.

Existing subsection (h) requires the presence of two men when lighting safety fuses.

Existing subsection (i) permits only devices designed to ignite safety fuse to be used.

The preamble to Section 7244 is proposed for repeal as it is informational only and therefore, is unnecessary.

The provisions of subsection (a) through (i), with the exception of the “Note” to subsection (c), are proposed for repeal as these provisions are contained in proposed Section 5298(a)(1), (a)(2), (a)(4), (a)(5), (a)(6), (a)(7), (a)(8), (a)(9), and (a)(10) of the GISO, respectively, and therefore, are unnecessary.

The “Note” to subsection (c) stating that a 3-foot safety fuse will fire a shot in about 2 minutes is proposed for transfer to Section 5298(a)(4)NOTE of the GISO. This proposal is necessary to ensure the employer is furnished this information as the GISO does not presently contain this information as a “NOTE”.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7244.)**

Section 7250. Firing with Electricity—General.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (a) prohibits electric blasting operations to be done when it is known there are stray electrical currents in the area sufficient to detonate the electric blasting caps being used.

Subsection (a) is proposed for transfer with revisions to proposed Section 5299 as new subsection (a) of the GISO. This proposal is necessary to further clarify the intent of several regulations within the GISO (i.e. Sections 5276, 5306, and 5314).

Existing subsection (b) permits the use of listed blasting devices or other means acceptable to the Division.

Subsection (b) is proposed for repeal as its provisions duplicate the requirements of Section 5299(b) and therefore, is unnecessary.

Existing subsection (c) prohibits the use of dry cell batteries for more than a single detonation. The dry cell batteries used for this purpose cannot have exposed terminals.

Subsection (c) is proposed for repeal as its provisions duplicate the requirements contained in the proposed revisions to Section 5299(b) of the GISO that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions contained in the GISO.

Existing subsection (d) permits firing with referenced devices, if the connections are as recommended by the manufacturer. When firing with a light or power circuit, the accompanying examples are to be used.

Subsection (d) is proposed for repeal as its provisions duplicate the requirements contained in the proposed revisions to Section 5299(c) of the GISO that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions contained in the GISO.

Existing subsection (e) delineates the amperage to be used to activate an explosion. In addition, subsection (e) contains a "NOTE" stating the minimum permissible amperages to be used for direct and alternating currents, series and parallel circuits, and when igniter cord is used with electric starters.

Subsection (e) is proposed for repeal as its provisions are contained in the proposed revisions to Section 5299(d) that are explained in the GISO and therefore, is unnecessary. The "NOTE" to subsection (e) is proposed for repeal as its provisions are contained in existing Section 5299(d)NOTE of the GISO that is proposed for transfer to revised Section 5299(c) with revisions that are explained in the GISO. This proposal is necessary to eliminate duplicative provisions contained in the GISO.

Existing subsection (f) requires that blasting wires be kept clear of conductive materials and features, except the earth itself.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (f) is proposed for repeal as its provisions duplicate the requirements of Section 5299(e) of the GISO and therefore, is unnecessary.

Existing subsection (g) prohibits grounding of the blasting circuit leading from the firing switch to the blast area.

Subsection (g) is proposed for repeal as its provisions duplicate the requirements of Section 5299(f) of the GISO and therefore, is unnecessary.

Existing subsection (h) prohibits the location of low-voltage electric power lines within 50 feet of loaded holes or if not possible to be moved, that they be de-energized before an electric detonator or starter is brought into the area. Where neither is possible, the area shall be checked for stray current.

Subsection (h) is proposed for repeal as its provisions duplicate the requirements of Section 5299(g) of the GISO and therefore, is unnecessary.

Existing subsection (i) requires the blasting circuit to be tested with a galvanometer before firing.

Subsection (i) is proposed for repeal as its provisions duplicate the requirements of Section 5299(h) of the GISO and therefore, is unnecessary.

Existing subsection (j) requires the circuit to remain shorted until the round is ready to test and fire.

Subsection (j) is proposed for repeal as its provisions duplicate the requirements of Section 5299(i) of the GISO and therefore, is unnecessary.

Existing subsection (k) delineates those areas where electric blasting may be used.

Subsection (k) is proposed for repeal as its provisions are contained in existing Section 5299(j) that is proposed for transfer to revised Section 5298(a)(3) of the GISO with revisions that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions contained in the GISO.

Diagrams of EXAMPLES OF BLASTING CIRCUITS.

Existing Section 7250 contains a series of diagrams showing examples of blasting circuits such as a diagram for series blasting, a diagram for parallel blasting, and a diagram for parallel-series blasting.

These series of diagrams are proposed for repeal as these examples of blasting circuits duplicate the examples of blasting circuits in Section 5299 of the GISO and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7250.)**

Section 7251. Firing Switches.

Existing subsection (a) requires that the firing switch conform to a list of six minimum requirements, addressing such things as exterior operation, that it is of double pole construction, short circuiting capabilities, minimum voltage ratings, mounting requirements, and where the leading and power line wires are to be attached.

Existing subsection (b) requires when firing by a light or power circuit, an air gap of at least 5 feet for underground operations and at least 15 feet for surface operations shall be provided except when firing. It further states how the air gap is to be established.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5300(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7251.)**

Section 7252. Auxiliary Switches.

Existing subsection (a) requires one or more auxiliary switch at the beginning of each branch circuit of the permanent leading wires.

Existing subsection (b) requires the auxiliary switch(es) to be as described in Section 7251 except that they need not be fused.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5301(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7252.)**

Section 7253. Permanent and Temporary Leading Wires.

Existing subsection (a) requires all leading wires to be of copper or aluminum of a specified type and number.

Existing subsection (b) requires permanent leading wires to be installed in conduit or strung on insulators, kept at least 5 inches apart.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (c) requires the conductor used to close the air gap to be “S” cable or equivalent.

Existing subsection (d) is specific to the capacity and wire gage to be used for the leading wires.

Existing subsection (e) requires that all splice be insulated and intrinsically safe.

Included in existing Section 7253 are two diagrams for recommended power firing systems for series and parallel series firing, one with and one without a circuit interrupter.

Subsections (a) through (e) and the diagrams are proposed for repeal as their provisions duplicate the requirements of Section 5302(a) through (e) and the diagrams of Section 5302 of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7253.)**

Section 7254. Blasting Procedure with Power and Light Circuits.

Existing subsection (a) requires that the keys for auxiliary and firing switches be under the control of the licensed blaster.

Subsection (a) is proposed for repeal as its provisions are contained in existing Section 5304(a) of the GISO that is proposed for transfer to Section 5299 as new subsection (k) with revisions that are explained in the GISO. This proposal is necessary to eliminate duplicative provisions contained in the GISO.

Existing subsection (b) requires that the auxiliary switch is in the “off” position, the air gap is open, the short circuiting device is in place, and the firing switch is locked in the “off” position before connecting the leading wires to the leg wires.

Subsection (b) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(a) of the GISO and therefore, is unnecessary.

Existing subsection (c) requires that temporary leading wires be tested prior to attaching to the leg wires for the presence of stray electric current with an instrument designed for that purpose. The stray current, if detected, is to be eliminated before attachment is made.

Subsection (c) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(c) of the GISO and therefore, is unnecessary.

Existing subsection (d) requires all persons to leave the blast area to a safe location before connecting the leading wires.



Initial Statement of Reasons  
Explosives Reorganization

Subsection (d) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(d) of the GISO and therefore, is unnecessary.

Existing subsection (e) indicates when the area is clear of all persons, the person responsible for firing may prepare the switch for firing.

Subsection (e) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(e) of the GISO and therefore, is unnecessary.

Existing subsection (f) prohibits reentry into underground blast areas for at least 15 minutes after primary blasting.

Subsection (f) is proposed for repeal as its provisions are contained in existing Section 5304(f) of the GISO that is proposed for transfer to Section 5291(k) of the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (g) requires post-blast locking of all switches in the “off” position and the leading wires be disconnected from the power source.

Subsection (g) is proposed for repeal as its provisions are contained in existing Section 5304(g) of the GISO that is proposed for transfer to proposed Section 5304(f) of the GISO with revisions that are explained in the GISO. This proposal is necessary to eliminate duplicative provisions contained in the GISO.

Existing subsection (h) requires that in the event of a shot failure, the firing switch is locked in the “off” position; the air gap is opened; and the blaster waits at least 30 minutes before proceeding to the auxiliary switch, locking it in the “off” position, and entering the blast area.

Subsection (h) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(g) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7254.)**

Section 7255. Blasting with Batteries, Blasting Devices, and Blasting Machines.

Existing subsection (a) requires the batteries and accessories for blasting operations be assembled in one unit. The units are to be acceptable to the Division and have no exposed live terminals.

Also included is a “NOTE” to existing subsection (a) stating that the Division may accept battery blasting devices approved by the listed institutions.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) requires that the blaster be in charge of the blasting machine and equipment. Only the blaster will connect the leading wires to the battery housing.

Existing subsection (c) prohibits the leading wires to be connected to the blasting machine or battery until all necessary steps and safeguards have been done.

Existing subsection (d) requires the blaster to reverse the connecting process immediately after firing the round.

Subsections (a) through (d) are proposed for repeal as the provisions of these subsections duplicate the requirements in Section 5299(b) and Section 5305(a) through (c) of the GISO, respectively, and therefore, are unnecessary.

The “NOTE” to subsection (a) that states the Division “may” accept battery-blasting devices approved by recognized institutions is proposed for repeal as it is informational only and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7255.)**

Section 7256. Electric Blasting in Proximity with Radio Transmitters.

Existing subsection (a) requires that a sign with a specific legend, with 4 inch lettering, and 5/8 inch stroke on a contrasting background be displayed prior to installation of electric sensitive devices.

A “NOTE” to existing subsection (a) is included referencing the USDOT for specific sign requirements.

Existing subsection (b) requires signs to be posted approximately 1,000 feet from the blasting area on all public access.

Existing subsection (c) contains 5 tables with minimum distances that an operating mobile or fixed radio, television, or radar transmitter may be located from electric blasting operations. Also, included in Section 7256, is information on the recommended tables of distances.

Subsections (a) through (c) and Tables 1 through 5 are proposed for repeal as their provisions duplicate the requirements of Section 5306(a) through (c) and Tables 1 through 5 of the GISO, respectively and therefore, are unnecessary. In addition, the information on the recommended tables of distances is proposed for repeal as it duplicates the information in Section 5306 as a proposed “NOTE” and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7256.)**

**Article 54. Mixing Blasting Agents.**

**Section 7260. General.**

Existing Section 7260 requires that blasting agents be transported, stored, and used in the same manner as explosive unless otherwise set forth in these orders. Water gels are to be treated in the same manner in accordance with the classification of the product.

Section 7260 is proposed for repeal as its provisions duplicate the requirements of Section 5340(a) and (b) of the GISO, respectively, and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7260.)**

**Section 7261. Mixing of Blasting Agents—Location.**

Existing subsection (a) requires that buildings, facilities, or mobile equipment used for mixing blasting agents are to be located in accordance with the Quantity and Distance Table in Section 7211, except for mobile equipment during loading operations.

Existing subsection (b) requires that when ammonium nitrate is stored at a closer distance to blasting agents than recommended by NFPA 495, 1969 Edition, then ½ the ammonium nitrate weight shall be added to the quantity of blasting agents for calculating purposes.

Existing subsection (c) requires ammonium nitrate fertilizer to be stored in compliance with NFPA 490-1960, and liquid oxidizers are to be stored to prevent contamination of blasting agents or fuels.

Subsections (a) through (c) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5341(a) through (c) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7261.)**

**Section 7262. Buildings.**

Existing Section 7262 contains a preamble that incorporates by reference Title 24 regulations. The following regulations relate to safe construction work practices that no longer exist in Title 24 and therefore, this preamble is unnecessary and proposed for repeal.

Existing subsection (a) requires that buildings constructed after May 21, 1971 be of noncombustible construction or of sheet metal on wooden studs.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (a) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5342(a) of the GISO and therefore, is unnecessary.

Existing subsection (b) states the Division may require explosion venting if “heavy construction is used.”

Subsection (b) is proposed for repeal as its provision is contained in existing Section 5342(b) of the GISO that is also proposed for repeal. The inclusion of the word “may” is conditional and therefore, makes this provision vague and unenforceable. Therefore, subsection (b) is unnecessary.

Existing subsection (c) requires a physical separation between the finished product storage area and the mixing and packaging operation.

Subsection (c) is proposed for repeal as its provisions duplicate the requirements of Section 5342(b) of the GISO and therefore, is unnecessary.

Existing subsection (d) requires the storage area floors to be made of concrete or other noncombustible material.

Subsection (d) is proposed for repeal as its provisions duplicate the requirements of Section 5342(c) of the GISO and therefore, is unnecessary.

Existing subsection (e) requires that fuel oil be stored outside the mix building and away from the oxidizer area. The fuel shut off shall be at the tank.

Subsection (e) is proposed for repeal as its provisions duplicate the requirements of Section 5342(e) of the GISO and therefore, is unnecessary.

Existing subsection (f) requires the building to be well ventilated and references Pamphlet No. 1 published by the Institute of Makers of Explosives, 1965 Edition, as evidence of good practice.

The provision requiring the building to be well ventilated is proposed for repeal as this requirement duplicates the requirement contained in Section 5342(f) of the GISO and therefore, is unnecessary. The reference to Pamphlet No. 1 by the Institute of Makers of Explosives, 1965 Edition, as evidence of good practice is proposed for transfer to Section 5342(f) of the GISO as a proposed “NOTE” with reference to an updated version. This proposal is necessary to ensure retention of the information contained in the MSO in the GISO.

Existing subsection (g) requires that heat be provided from a unit located outside the building or by electric heat at a safe distance from combustible material.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (g) is proposed for repeal as its provisions duplicate the requirements of Section 5342(g) of the GISO and therefore, is unnecessary.

Existing subsection (h) requires that personnel limits be established, posted, and enforced while mixing operations are underway.

Subsection (h) is proposed for repeal as its provisions duplicate the requirements of Section 5342(h) of the GISO and therefore, is unnecessary.

Existing subsection (i) requires that blasting agents and fuels be removed from the mix house before major or open flame repairs are made.

Subsection (i) is proposed for repeal as its provisions duplicate the requirements of Section 5342(i) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7262.)**

Section 7263. Mix Room Equipment.

Existing subsection (a) requires that the mixer be designed to minimize the possibility of friction, heating, compaction, and confinement.

Subsection (a) is proposed for repeal as its provisions duplicate the requirements of Section 5344(a) of the GISO and therefore, is unnecessary.

Existing subsection (b) requires that bearings and gears be mounted on the outside of the machine and protected from the accumulation of dust.

Subsection (b) is proposed for repeal as its provisions duplicate the requirements of Section 5344(b) of the GISO and therefore, is unnecessary.

Existing subsection (c) requires all surfaces be accessible for cleaning.

Subsection (c) is proposed for repeal as its provisions duplicate the requirements of Section 5344(c) of the GISO and therefore, is unnecessary.

Existing subsection (d) requires the equipment be constructed of materials compatible with blasting agents.

Subsection (d) is proposed for repeal as its provisions duplicate the requirements of Section 5344(d) of the GISO and therefore, is unnecessary.

Existing subsection (e) prohibits the use of equipment that could overheat the blasting agent or create excessive static electricity.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (e) is proposed for repeal as its provisions are contained in existing Section 5344(e) of the GISO that is proposed for transfer to revised Section 5344(a). Therefore, this proposal is necessary to eliminate duplicative provisions contained in the GISO.

Existing subsection (f) requires all electrical equipment to comply with the Electrical Safety Orders.

Subsection (f) is proposed for repeal as its provisions duplicate the requirements of Section 5344(e) of the GISO and therefore, is unnecessary.

Existing subsection (g) requires a water deluge system in the mixing and storage areas, and prohibits floor drains into which molten materials could flow and be confined in the event of a fire. Floors and equipment are to be washed down frequently to prevent an accumulation of oxidizers or fuels and other sensitizers. Additionally, the entire mixing and packaging plant is to be washed down periodically.

Subsection (g) is proposed for repeal as its provisions duplicate the requirements of Section 5344(f) of the GISO and therefore, is unnecessary.

Existing subsection (h) prohibits any ignition source within 50 feet of any mixing building or facility used for mixing.

Subsection (h) is proposed for repeal as its provisions duplicate the requirements of Section 5344(g) of the GISO and therefore, is unnecessary.

Existing subsection (i) requires empty oxidizer bags to be disposed of in a safe manner.

Subsection (i) is proposed for repeal as its provisions duplicate the requirements of Section 5344(h) of the GISO and therefore, is unnecessary.

Existing subsection (j) states that not more than 4 hours production of blasting agents or the limit determined by the quantity and distance table, whichever is less, shall be permitted in or near mixing and packaging areas.

Subsection (j) is proposed for repeal as its provisions duplicate the requirements of Section 5344(i) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7263.)**

Section 7264. Composition.

Existing subsection (a) requires that the sensitivity of a blasting agent be determined by the use of a No. 8 test blasting cap and after every change in formulation or as may be required by the Division.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) requires the supervision by a competent person when formulating unusual compositions. The Division may require stability tests by a recognized authority to determine safety of the mix.

Existing subsection (c) prohibits the use of a hydrocarbon liquid fuel with a flash point lower than that of No. 2 diesel fuel oil, or 110 degrees Fahrenheit minimum.

Existing subsection (d) prohibits the use of crankcase or crude oils as an ingredient.

Existing subsection (e) requires solid fuels to be handled in a manner to minimize dust explosion hazards.

Existing subsection (f) prohibits the use of powdered ammonium nitrate, high explosives, smokeless propellant, peroxides, chlorates, or perchlorates unless accepted by the Division.

Existing subsection (g) requires the ingredients to be measured to ensure quality control.

Subsections (a) through (f) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5345(a), (e)EXCEPTION, (b), (c), (d), and (e) of the GISO, respectively, and therefore, are unnecessary.

Subsection (g) is proposed for transfer to Section 5345 as new subsection (f) of the GISO. This proposed action is necessary to ensure the appropriate balance of ingredients is obtained to ensure complete deflagration or explosion occurs.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7264.)**

Section 7265. Blasting Agent Storage.

Existing subsection (a) requires that blasting agents are stored as set forth in Article 51 with the exception that buildings need not be bullet resistant.

Subsection (a) is proposed for repeal as its provisions duplicate the requirements of Section 5346(a) of the GISO and therefore, are unnecessary.

Existing subsection (b) permits the use of on the highway haulage vehicles to be used for temporary blasting agent materials storage. They are to be located in compliance with Article 51 and secured against theft in a manner acceptable to the Division.

Subsection (b) is proposed for repeal. These same provisions are contained in existing Section 5346(c) of the GISO that references back to Article 114, Storage of Explosives and is also proposed for repeal. The provisions of subsection (b) are contained in proposed new Section 5253.1(b), (d), and (e), Article 114 of the GISO that was also transferred from Section 1562(a) – (g) of the CSO and therefore, is unnecessary.

Initial Statement of Reasons  
Explosives Reorganization

Proposed new Section 5253.1 of the GISO contains the requirements for the construction and use of magazines.

Existing subsection (c) requires the storage facility to be labeled on four sides with a warning sign and specific legend, letter size, and sign color.

Subsection (c) is proposed for repeal as its provisions duplicate the requirements of Section 5346(b) of the GISO and therefore, are unnecessary.

Existing subsection (d) permits the storage of blasting agents and blasting agent slurries in noncombustible bins provided they comply with the storage requirements of Article 51. All openings are to be locked except during use and the containers will be constructed of materials compatible with the stored blasting agents.

Subsection (d) is proposed for repeal as its provisions duplicate the requirements of Section 5346(c) of the GISO and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7265.)**

Section 7266. Transportation of Blasting Agents.

Existing subsection (a) requires blasting agents to be transported in compliance with Article 52.

Existing subsection (b) permits the transportation of bulk blasting agents and water gels in hopper trucks provided that the pump or conveyor, including electrical equipment, is equivalent to on site mix trucks.

Existing subsection (c) requires the trailer or truck be posted with warning signs on all four sides reading “EXPLOSIVES” with specific colors and sized letters.

Subsections (a) through (c) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5347(a) through (c) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7267.)**

Section 7267. On-Site Mixed Water Gels and Blasting Agents.

Existing subsection (a) requires that the composition of field mixed blasting agents and water gels meet the requirements of Section 7264.

Subsection (a) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5348(a) of the GISO and therefore, is unnecessary.



Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) requires that liquid fuels be stored in separate tanks with shut off valves. Also, solid fuels shall be stored in separate containers until mixed.

Subsection (b) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5348(b) of the GISO and therefore, is unnecessary.

Existing subsection (c) requires ingredients that are classified as Class A or Class B explosives are to be stored as required by Article 51.

Subsection (c) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5348(c) of the GISO and therefore, is unnecessary.

Existing subsection (d) requires prilled, grained or granulated ammonium nitrate to be stored in accordance with 1969 NFPA 490, Code for the storage of ammonium nitrate.

Subsection (d) is proposed for repeal as its provisions are contained in existing Section 5348(d) of the GISO that is proposed for repeal and is also contained in Section 5359(c) of the GISO and therefore, is unnecessary.

Existing subsection (e) requires that liquid ammonium nitrate be store in mobile or permanent tanks in a safe location acceptable to the Division. Spills or leaks that may contaminate combustible materials shall be cleaned up immediately.

Subsection (e) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5348(d) of the GISO and therefore, is unnecessary.

Existing subsection (f) requires mixing equipment to comply with this section. This subsection contains five subparts [subsections (f)(1) through (5)] which address requirements for an outside power source; conformance with Title 24, Part 3, California Electrical Code; bonding; minimizing friction heating compaction and dust protection; and mixing machine and transfer equipment compatible with the blasting agent(s) being mixed.

Subsections (f) and (f)(1) through (5) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5348(e) and (e)(1) through (5) of the GISO, respectively, and therefore, are unnecessary.

Existing subsection (g) prohibits the use of pumps or conveyors that could overheat the blasting agents.

Subsection (g) is proposed for repeal as its provisions are contained in existing Section 5348(g) of the GISO that is proposed for transfer to revised Section 5348(e)(4) with revisions that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions contained in the GISO.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (h) prohibits pulverizing or crushing sensitized blasting agents.

Subsection (h) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5348(f) of the GISO and therefore, is unnecessary.

Existing subsection (i) requires that each mixer unit be equipped with an operable, UL approved 4 BC or equivalent fire extinguisher.

Subsection (i) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5348(g) of the GISO and therefore, is unnecessary.

Existing subsection (j) requires that all unused explosives be returned to the magazine or designated storage area upon completion of the loading operations.

Subsection (j) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5276(e) of the GISO, the general regulations for blasting operations and Section 5348(h) of the GISO, regulations specific to blasting agents, and therefore, is unnecessary.

Existing subsection (k) requires the mixing unit to be signed in a specific manner.

Subsection (k) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5348(i) of the GISO and therefore, is unnecessary.

Existing subsection (ℓ) prohibits repairs using a flame producing device to be made on the mixer until the blasting agents and water gels have been removed.

Subsection (ℓ) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5348(j)(1) of the GISO and therefore, is unnecessary.

Existing subsection (m) requires the unit to be cleaned frequently and before open flame work is accomplished.

Subsection (m) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5348(k) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7267.)**

**Article 55. Licensing of Blasters.**

**Section 7275. Competency of Blasters.**

Existing subsection (a) requires a licensed blaster for blasting operations within the scope of these orders.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (a) is proposed for transfer to Section 5238(a) of the GISO. This proposal is necessary to clarify that a competent or qualified person is a licensed blaster.

Existing subsection (b) requires a licensed blaster to be physically present where the blasting operations are taking place. Also, the blaster is to direct and supervise the operation. The regulation then provides examples of blasting operations.

The portion of subsection (b) referring to the licensed blaster and the use of explosives to be under the supervision of a licensed blaster is proposed for transfer to Section 5238(a) of the GISO. This proposal is necessary as all blasting operations within the CSO, MSO, and TSO require the presence of a licensed blaster and the GISO presently does not contain this requirement. In addition, Labor Code, Section 7990 limits the use of explosives to persons licensed by the Division.

The latter portion of subsection (b) referring to the various types of blasting operations is proposed for transfer to Section 5237, the definition section of the GISO, under the term “Blasting Operation”. This proposal is necessary to ensure retention of the definition of the “blasting operation” within the GISO.

Existing subsection (c) permits a reasonable number of persons at least 18 years old to work under the direct supervision of the licensed blaster for the purpose of obtaining the necessary experience to qualify for a Blaster’s License.

Subsection (c) is proposed for transfer to Section 5238(c)NOTE and Section 5276(g)EXCEPTION of the GISO. This proposal is necessary to clarify the circumstances under which individuals may train for a Blaster’s License.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7275.)**

Section 7276. Blaster’s License—Qualifications.

Existing Section 7276 states every person requesting a blaster’s license shall meet the specified criteria. This statement is proposed for transfer to Section 5238(f) of the GISO. This proposal is necessary to direct the reader to the following requirements.

Existing subsection (a) requires the applicant to be at least 21 years old.

Subsection (a) is proposed for transfer to Section 5238(f)(1) of the GISO. Although existing Section 5238(b) is already clear that the person in charge is to be at least 21 years old, this transfer is necessary to clearly indicate that the licensed blaster is to be at least 21 years old.

Existing subsection (b) requires the applicant to be able to understand and communicate understandably.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (b) is proposed for transfer to Section 5238(c) of the GISO. This proposal is necessary to ensure that the intent of Section 3203(a)(3), the requirement for an injury and illness prevention program, and the ability of the employees to be able to understand orders and directions are complied with.

Existing subsection (c) requires the applicant to furnish proof of being proficient in the knowledge and use of explosives and ancillary equipment or furnish proof of at least three years of experience as an assistant to a licensed blaster.

Subsection (c) is proposed for transfer to Section 5238(d)(1) and (f)(2). This proposal is necessary to ensure the applicant is informed of the minimum requirements to obtain a blaster's license.

Existing subsection (d) requires the applicant to be of good moral character and physical condition so as not to interfere with the performance of the duties and ability to direct/conduct blasting operations.

Subsection (d) is proposed for transfer to Section 5238(b), except for the language of the regulation that states the applicant must be of good moral character. This proposal is necessary to ensure the applicant is physically capable of performing the duties of a licensed blaster. The provision that states the applicant must be of good moral character is proposed for repeal as it is undefined as to what is considered good moral character and therefore, this provision is vague. Therefore, this provision is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7276.)**

Section 7277. Blaster's License—Application and Examination.

Existing subsection (a) requires a completed application form to be submitted to the Division.

Existing subsection (b) requires the Division to evaluate the application based on the information given.

Existing subsection (c) requires the applicant to pass a written and oral examination that relates to the license classification requested. A field test may be considered necessary.

Existing subsection (d) contains the class, category, and description of the applicable classifications.

Existing subsection (e) permits the Division to place limitations on the blaster's license.

Existing subsection (f) prohibits transferring the blaster's license.

Initial Statement of Reasons  
Explosives Reorganization

Subsections (a) through (f) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 344.20(a) through (f) of the California Occupational Safety and Health Regulations, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7278.)**

Section 7278. Expiration and Renewal.

Existing subsection (a) states the blaster's license is valid for a period of 5 years with renewal privileges.

Existing subsection (b) requires the renewal application to be administered in the same manner as an original blaster's license. The examination is required every five years.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 344.21(a) and (b) of the Occupational Safety and Health Regulations, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7278.)**

Section 7279. Custody of Blaster's License.

Existing subsection (a) requires that the blaster's license be presented by the blaster to the employer as evidence of qualifications.

Existing subsection (b) requires the blaster to display the blaster's license upon request for inspection by the Division or other enforcement officials.

Subsections (a) and (b) are proposed for transfer to Section 5238(a) and (e) of the GISO, respectively. This proposal is necessary to ensure the employer is made aware that the blaster is to have a current license to perform blasting operations and must present it to the employer, and the Division, if requested.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7279.)**

Section 7280. Blasting Accident Reports and Procedures.

Existing Section 7280 contains reporting requirements for employers should there be a blasting accident or unusual occurrence affecting the safety of employees in which explosives are involved.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (a) requires that the Division be notified within 24 hours of the incident.

Existing subsection (b) requires that the report identifies the blasters involved and the employees injured. The type of explosives and method of initiation are to be identified. An account of the incident shall be prepared.

Existing subsection (c) states that if a serious injury occurs, then the blasting operation will be discontinued until the Division has completed its investigation or authorized the resumption of work.

Existing subsection (d) requires the employer to notify the Division if the holder of the blaster's license is guilty of a breach of the provisions of this Article.

Existing subsection (e) prohibits the employer to direct the blaster to perform a blasting operation that violates a Title 8 regulation.

Subsections (a) through (c) are proposed for transfer to new Section 5248(a) through (c) of the GISO, respectively. This proposal is necessary to establish a consistent reporting policy for the employer as already required in the CSO, MSO, and TSO.

Subsections (d) and (e) are proposed for repeal. The provisions of subsections (d) and (e) are already required by Labor Code, Section 6403 and Section 3203 of the GISO, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 7280.)**

Section 7281. Suspension—Blaster's License.

Existing subsection (a) gives reasons for which the Division may suspend a blaster's license. Grounds for suspension may include questions of competency or violations of Title 8 regulations.

Existing subsection (b) requires a notice be given and a hearing held before suspending or revoking a license.

Existing subsection (c) states that should the blaster's license be suspended or revoked, the individual is prohibited from applying for a new license for a period of six months.

Subsection (a) through (c) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 344.22(a) through (c) of the California Occupational Safety and Health Regulations, respectively, and therefore are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of**

Initial Statement of Reasons  
Explosives Reorganization

**the text of Section 7281.)**

Section 7282. Labor Code Excerpts.

Existing Section 7282 refers to Appendix “A”.

This information is proposed for repeal as it references an appendix in the Mine Safety Orders that is proposed for repeal and therefore, is unnecessary.

Section 7283. Blaster’s License Fees.

Existing Section 7283 is proposed for repeal as it merely directs the reader to reprints and therefore, is unnecessary. Also, this section is proposed for repeal as the provisions of Labor Code, Section 7991 set blaster’s license fees and therefore, is unnecessary.

Appendix A. Excerpts from the Labor Code.

As stated in the title, existing Appendix A contains excerpts from the Labor Code. These excerpts address license suspension, the ramifications that could occur if the blaster is convicted of violating the safety orders involving the use or handling of explosives in which an accident occurred causing serious injury or death, and the possibility of having the blaster’s license permanently revoked.

This Appendix is proposed for repeal. This Appendix merely reiterates the Labor Code, Sections 7993, 7994, and 7995 and therefore is duplicative and unnecessary.

Appendix B. Blaster’s License Fees.

Existing Appendix B contains a “NOTE” which states where the information for blaster’s license fees may be found. This Appendix then states what the fee is and at what types of locations the license is necessary. Also included is the fee for license renewal.

This Appendix is proposed for repeal. The Appendix merely reiterates the California Occupational Safety and Health Regulations that pertains to the Division of Occupational Safety and Health and therefore, is duplicative and unnecessary. Therefore, the proposed action will have no effect on the regulated public.

## **Subchapter 20. Tunnel Safety Orders.**

It is proposed to either repeal or transfer the explosive regulations from the Tunnel Safety Orders (TSO) to Group 18 of the General Industry Safety Orders (GISO). Those explosive regulations in the TSO that are proposed for repeal are either obsolete requirements or already exist within the GISO. The proposal to eliminate obsolete requirements is necessary to remove regulations that are no longer applicable. The proposal to eliminate duplicative regulations is necessary to remove duplication of requirements. Because the requirements already exist in the GISO, the regulations necessary to maintain a safe and healthful work site will still be in effect.

Those explosive regulations in the TSO that are proposed for transfer into the GISO are those that are unique to tunnel construction blasting that presently do not exist in the GISO or are proposed for transfer to clarify the existing GISO requirements. This proposal is necessary to consolidate the explosive regulations into one location in the GISO, making it more convenient for the user.

### **Article 2. Definitions.**

#### **Section 8405. Definitions.**

Existing Section 8405 contains definitions of terms used within the TSO regulations to ensure the devices and/or processes addressed within the regulations are clearly defined and understood.

The existing introductory language states that the following definitions shall apply in the application of these orders. It also states that the singular number, whenever used herein, also means and includes the plural number, unless the context otherwise requires. In addition, it states that the masculine gender, whenever used herein, also means and includes the feminine gender, unless the context otherwise requires.

It is proposed to delete the latter part of this introductory language that states the singular number, whenever used herein, also means and includes the plural number, unless the context otherwise requires and the masculine gender, whenever used herein, also means and includes the feminine gender, unless the context otherwise requires. This proposal is necessary to delete obsolete language that is no longer applicable and therefore, unnecessary.

It is proposed to repeal, transfer, and transfer and editorially revise some of the definitions of Section 8405 to Section 5237 of the GISO, the definition section. The definitions that are proposed for repeal either already exist in the GISO and therefore, eliminate duplicative definitions or reflect obsolete industry practices, technology, terminology, or classification of materials and therefore, are no longer necessary. The definitions that are proposed for transfer to the GISO are either transferred verbatim or



## Initial Statement of Reasons Explosives Reorganization

transferred and editorially revised for clarity to reflect changing industry practices, technology, terminology, or classification of materials.

The following definitions are proposed for **repeal**: ANFO; Barricaded-Artificial; Barricade-Natural; Barricaded; Blaster; Blast Area; Blasting Accessories; Blasting Agent; Blasting Cap (the term “Blasting Cap” already exists in the GISO; however, the definition is proposed for transfer under the term “Detonator”); Blasting Circuit; Blasting Machine; Blasting Mat; Blasting Operation; Blasting Shelter; Bullet Resistant; Cap Crimper; Cap Fuse; Chlorate Explosives (the term “Chlorate Explosives” already exists in the GISO; however, the definition is proposed for transfer under the term “Explosive Materials” as “Explosives, Chlorate”); Connecting Wires; Coyote Hole; Detonating Cord; Detonator; DOD; DOT (the abbreviation “DOT” already exists in the GISO; however, the abbreviation is proposed for transfer under the abbreviation “USDOT”); Electric Blasting Cap (the term “Electric Blasting Cap” already exists in the GISO; however, the term is proposed for transfer under the term “Detonator”); Explosives; Explosives, Class A (obsolete classification); Explosives, Class B (obsolete classification); Explosives, Class C (obsolete classification); Fuse, Safety; Igniter Cord; Inhibited Building; Leading Wires; Misfire; Missed Hole; Nitro-Carbo-Nitrate (obsolete terminology); Powder (obsolete terminology); Primary Blasting; Primer; Safety Fuse; Secondary Blasting; Slurry Explosives; Springing; Squib Electric; Stemming (the term “Stemming” is already exists in the GISO as “Stemming Material” with editorial revisions); and, Water Gels, Slurry Explosives and (A) and (B).

The following definitions are proposed for **transfer** to Section 5237 of the GISO: Loading Hose (editorially revised for clarity); Loading Line (editorially revised for clarity); Loading Tube (editorially revised for clarity); Mudcapping; Permanent Leading Wires [transferred to the GISO and editorially revised for clarity under the term “Permanent Blasting (Leading) Wires”]; and, Static Dissipating (editorially revised for clarity).

### **Article 20. Explosives.**

The heading “GENERAL” is proposed for repeal as it is no longer applicable as a result of this proposal and therefore, is unnecessary.

#### **Section 8505. Minors.**

Existing subsections (a) and (b) prohibit any person under the age of 18 to be involved with any activity relating to the storage, use, handling, storage, and transportation of explosive materials. Any person between the age of 18 and 21 may be involved in any activity relating to the storage, use, handling, transportation of explosive materials provided they are under the direct personal supervision of a competent person.

Subsections (a) and (b) are proposed for repeal as these provisions are contained in existing Section 5238(a) and (b), respectively, of the GISO that is proposed for transfer to

Initial Statement of Reasons  
Explosives Reorganization

Section 5276(g) with revisions that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8505.)**

Section 8506. Training.

Existing Section 8506 requires that all persons involved with detonators or explosives be trained in the hazards of the job. Trainees are to be under the direct supervision of a competent person.

Section 8506 is proposed for repeal as its provisions duplicate the requirements of Section 5239 of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8506.)**

Section 8507. Deteriorated Explosives.

Existing Section 8507 requires explosives unfit for use to be destroyed in a safe place by a competent person as set forth by the US Bureau of Mines and the Institute of Makers of Explosives or other recognized authority. Explosives are never to be buried or covered as means of disposal.

Section 8507 is proposed for repeal as the provisions of this section duplicate the requirements of Section 5240(a) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8507.)**

Section 8508. Explosives for Blasting.

Existing subsection (a) prohibits the use of chlorate explosives for blasting operations.

Existing subsections (b) and (c) require that explosives are to be of a type that will not freeze at any temperature that may be reasonably expected, and that advice is to be obtained from the explosive manufacturer before using or attempting to thaw frozen explosives.

Subsections (a) and (b) are proposed for repeal as their provisions are contained in Section 5241(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

Subsection (c) is proposed for repeal as its provisions are permissive in nature and unenforceable and therefore, are unnecessary. Also, subsection (c) duplicates the requirements of existing Section 5241(c) of the GISO that is proposed for repeal and

Initial Statement of Reasons  
Explosives Reorganization

therefore, is unnecessary. Proposed Section 5240(a) of the GISO addresses the use of frozen explosives.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8508.)**

Section 8509. Water Gels.

Existing subsection (a) requires that water gels containing explosive be manufactured, transported, stored and used as specified in this Article.

Existing subsection (b) requires that water gels without explosives but are cap sensitive, as defined under “Blasting Agent”, shall also be classified and manufactured, transported, stored, and used as specified for explosives in this Article.

Existing subsection (c) requires that water gels which are not cap sensitive, as defined by “Blasting Agent”, are to be classified as blasting agents and manufactured, transported, stored, and used as blasting agents as specified in this Article.

Subsection (a) is proposed for repeal as its provisions duplicate the requirements of proposed Section 5242(a) of the GISO.

Subsection (b) is proposed for repeal as its provisions are currently contained in existing Section 5242(b) that is proposed for repeal and transferred into proposed Section 5242(a).

Subsection (c) is proposed for repeal as its provisions duplicate the requirements of proposed Section 5242(b) of the GISO. Therefore, this proposal is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8509.)**

Section 8510. Explosives for Underground Use.

Existing Section 8510 requires explosive to underground use to meet specific criteria determined by delineated tests using a standard cartridge in a Bichel Gauge. These tests are to be conducted using the standard procedure of the U.S. Bureau of Mines. Only Fume Class 1 explosives are to be used underground and the fume class is to be clearly marked on the case in letters of a minimum height. The regulation permits the use of permissible explosives under specified conditions and locations. It further states that only plant mixed blasting agents where composition control is assured is permitted for use underground and the use of black powder for blasting operations is prohibited underground.

Section 8510 is proposed for repeal as the provisions of subsections (a) – (f) are contained in Section 5244(a); the provisions of subsection (g) are contained in Section 5244(b); the provisions of subsection (h) and the NOTE are contained in Section 5244(d)

Initial Statement of Reasons  
Explosives Reorganization

and (d)NOTE; the provisions of subsection (i) are contained in Section 5244(f); and the provisions of subsection (j) are contained in Section 5243(a)(8) of the GISO. Therefore, this proposal is necessary to eliminate duplicative requirements already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8510.)**

Section 8511. Electric Detonation of Explosives During Lightning and Dust Storms.

Existing subsection (a) requires that all blasting operations using electric caps or static sensitive explosives shall be stopped when there is a lightning storm.

Existing subsection (b) requires that when there is an approaching dust storm capable of producing sufficient static electricity to detonate an electric blasting cap, all operations are to be halted. In both cases, all persons shall be withdrawn to a safe location.

Existing subsection (c) states that instrumentation to determine the presence of static electricity within 15 miles of the portal and a means to signal the heading is required.

Subsection (a) is proposed for repeal as its provisions are contained in proposed Section 5245(a) of the GISO and therefore, is unnecessary.

Subsection (b) is proposed for repeal as its provisions are contained in existing Section 5245(b) that is proposed for transfer to proposed Section 5245(a) of the GISO and therefore, is unnecessary.

A portion of subsection (c) pertaining to instrumentation to determine the presence of static electricity is proposed for repeal because this provision is already contained in existing Section 5245(c) of the GISO that is to be incorporated into proposed Section 5245(c). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO. The other portion of subsection (c) specifying within 15 miles of the portal, a means to signal the heading shall be provided is proposed for transfer to proposed Section 5245(c) of the GISO. This proposal is necessary to ensure retention of the existing TSO regulation within the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8511.)**

Section 8512. Smoking and Open Flames.

Existing Section 8512 prohibits smoking and open flames within 50 feet of explosive material in the open except where permitted by these orders.

Section 8512 is proposed for repeal as its provisions duplicate the requirements of Section 5246 of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8512.)**

Section 8513. Transferring Explosives.

Existing subsection (a) prohibits the lowering or hoisting of powder and primers or detonators together in the same cage, skip, or bucket, unless in a powder car. Explosives are not to be lowered or hoisted in these conveyances with other materials, supplies or equipment. There will be no temporary storage or stacking at the shaft or collar.

Existing subsection (b) states that reasonable precautions are to be taken to prevent unauthorized access.

The first provision of subsection (a) is proposed for transfer to proposed Section 5265 as new subsection (e) of the GISO (a specific requirement for hoisting and lowering requirements) and a similar provision is already contained in Section 5264(c) of the GISO (a general requirement for tunnel operations). This proposal is necessary to clarify the intent of the existing requirements.

The second provision of subsection (a) is proposed for repeal as a similar provision is contained in Section 5264(e) of the GISO and the fourth provision of subsection (a) is proposed for repeal as a similar provision is contained in Section 5264(a) of the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

The third provision of subsection (a) is proposed for transfer to proposed Section 5262 as new subsection (r) of the GISO. This proposal is necessary to provide specificity to the general requirements that are already within the GISO.

Subsection (b) is proposed for repeal as a similar provision is contained in Section 5262(q) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8513.)**

**Article 21. Storage of Explosives.**

Section 8514. Storage General Requirements.

Existing Section 8514 contains the general requirements for the storage of explosives. The regulations require that all explosives are to be stored in a first or second-class magazine except when being transported. The regulation also specifies that any quantity of explosives over 100 pounds is to be stored in a first-class magazine. An exception to this requirement is permitted for small arms ammunition and Class C explosives such as

## Initial Statement of Reasons Explosives Reorganization

explosive power packs in the form of explosive cartridges or explosive-charged construction devices, explosive rivets and like devices. Any quantity of these devices over 50 pounds is to be stored in a magazine. The regulation prohibits the storing of blasting caps with explosives or blasting agents; contains prohibitions regarding detonating cord; requires maintaining a specified brush free distance around the magazine; specifies requirements for magazine locks and persons permitted to enter the magazine; indicates where electric power lines are to be with respect to the magazine; and requires that ammonium nitrate fuel oil blasting agents be physically separated from explosives stored in the same magazine. The regulation states that care is to be taken to ensure that the oil from the blasting agent does not contaminate the explosives. The regulation states that unless otherwise set forth in these Orders, blasting agents are to be treated in the same manner as explosive materials. The regulation states that during the transfer, handling, and re-storage of explosives, precautions against unauthorized access are to be taken. The regulation states that first class magazines are prohibited within 300 feet of a portal or access shaft of a tunnel under construction.

Subsections (a), (d), (e), (f), and (i) are proposed for repeal as these provisions are contained in proposed Section 5251(a), (c), (d), (e) and (e)(1), and (f) of the GISO, respectively, and therefore, are unnecessary.

Subsection (b) is proposed for repeal as its provisions are contained in existing Section 5251(b) that is proposed for transfer to proposed Section 5251(h) of the GISO. Subsection (c) is proposed for repeal as its provisions are contained in existing Section 5251(c) that is proposed for transfer to proposed Section 5251(h)(2) of the GISO. Subsection (g) is proposed for repeal as its provisions are contained in existing Section 5251(g) that is proposed for transfer to proposed Section 5251(j) of the GISO. Subsection (h) is proposed for repeal as its provisions are contained in existing Section 5251(h) that is proposed for transfer to proposed Section 5251(j) of the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions contained in the GISO.

A portion of existing subsection (j) is proposed for transfer to Section 5251(g) of the GISO. This proposed transfer to prohibit explosives storage magazines to be located within specified distances of low and high voltage electrical lines is necessary as it is industry practice to maintain the 25 foot distance from low-voltage electrical lines and the 100 foot distance from overhead high-voltage electrical lines. Also, this regulation does not presently exist in the GISO.

The other portion of existing subsection (j) regarding the proper placement of magazines should an electrical line break is proposed for repeal as this regulation is already contained in Section 5251(g) of the GISO and therefore, is unnecessary.

Subsection (k) is proposed for transfer to Section 5256(m) of the GISO. This proposal is necessary to ensure retention of the existing TSO regulation within the GISO.

Subsection (ℓ) is proposed for repeal as its provisions are contained in Section 5340(a) of the GISO. Subsection (m) is proposed for repeal as its provisions are contained in

Initial Statement of Reasons  
Explosives Reorganization

Section 5262(q) of the GISO. Therefore, these proposals are necessary to eliminate duplicative provisions already contained in the GISO.

Subsection (n) is proposed for transfer to Sections 5251(o) of the GISO. This proposal is necessary to ensure retention of the existing TSO regulation within the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8514.)**

Section 8515. Quantity and Distance Table for the Storage of Explosives—Class A.

Existing Section 8515 regulations and an accompanying table state the requirements for the minimum distances that a magazine with a specified quantity of blasting caps or explosives subject to mass detonation may be situated from listed topographical features. This section requires the listed distances be doubled where there is no barricade for the magazine or an inhabited building. The section further addresses situations in which there are two or more storage facilities on the same property and what is required under those conditions. The section gives equivalency of explosives for blasting caps and detonating cord.

The existing Table entitled “Quantity and Distances Table for the Storage of Explosives – Class A” lists distances when storage is barricaded. This Table is not applicable to any handling or temporary storage necessary if incidental to the transportation of explosives.

Subsections (a) through (h) of Section 8515 and the Table entitled “Quantity and Distances Table for the Storage of Explosives–Class A” are proposed for repeal as these provisions duplicate the requirements of proposed Section 5252(a); proposed TABLE EX-1; Section 5252(e), (c), (d), (b), and (a); and proposed TABLE EX-1 of Section 5252 of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8515.)**

Section 8516. Quantity and Distance Table for Storage of Explosives—Class B  
Distances in Feet When Storage is Unbarricaded.

Existing Section 8516 consist of a explanation of a Class B explosive and a table of unbarricaded distances from topographical features that specified quantities of Class B explosives are to be stored. The regulation further states that the distance is not to be reduced because of the presence of barricades or earth cover.

This section is proposed for transfer to new Section 5252.1 as “Quantity and Distance Table for Storage of Explosives - Low Explosives Distances in Feet When Storage is Unbarricaded” in the GISO. This proposed action is necessary to ensure that these regulations that are currently contained in the mining and tunneling safety orders are contained in the GISO. In addition, the DOD and ATF regulations already require the

Initial Statement of Reasons  
Explosives Reorganization

exact same requirements for many years.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8516.)**

Section 8517. First-Class Magazines.

The introductory paragraph of existing Section 8517 states that first-class magazines shall apply to all building, excavation, tunnel, igloo, military and portable type magazines used for the storage of explosives.

The preamble to Section 8517 is proposed for repeal as the statement merely gives examples of storage facilities and therefore, is unnecessary. Additionally, the following subsections are specific to how first-class magazines are to be constructed.

Existing subsection (a) requires magazines to be constructed of masonry, wood, metal, or a combination of these materials. Included is the minimum thickness of wall construction using the referenced materials. Also included is a statement that only tongue and grooved lumber or plywood is to be used and wood is to be covered with metal to provide fire protection.

Subsection (a)(1) through (a)(4) are proposed for repeal as their provisions are contained in existing Section 5254(c)(1) through (c)(4) of the GISO that is proposed for transfer to new Section 5253.1(a)(1). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsections (a)(5) and (a)(6) regarding two layers of No. 6 Manufacturers Standard Gage or heavier steel spaced a minimum  $\frac{1}{2}$  inch apart and interior lines with a minimum of 2 inches of wood and two layers of wood at least 2 inch normal thickness each spaced a minimum 4 inches apart with the hollow space filled with weak cement, well tamped sand, or equivalent material are proposed for repeal as their provisions are contained in existing Section 5254(c)(5) and (c)(6) of the GISO that is proposed for transfer to new Section 5253.1(a)(1)(B)2. and new Section 5253.1(a)(1)(B)1., respectively. Subsections (a)(7) and (a)(7)(A) pertaining to wood shall be of tongue and grooved lumber or plywood are proposed for repeal as these provisions are no longer applicable and therefore, are unnecessary. Subsection (a)(7)(B) regarding wood shall be covered on the exterior side with metal to provide protection against sparks is proposed for repeal as its provisions are contained in existing Section 5254(c)(4) of the GISO. Existing Section 5254(c)(4) is proposed for transfer to proposed new Section 5253.1(a)(1)(A)3. that addresses sparks and fire resistant magazines.

In addition, proposed new Section 5253.1 of the GISO will address the construction of walls for storage magazines. Proposed new Section 5253.1 incorporates the Bureau of Alcohol, Tobacco, and Firearms (ATF) regulations. ATF is the lead federal agency for regulating the storage of explosive materials throughout the United States. Therefore,



Initial Statement of Reasons  
Explosives Reorganization

this proposal is necessary to eliminate provisions no longer applicable and to eliminate duplicative provisions already contained in the GISO.

Existing subsection (a) contains a “NOTE” that states that any sheeting used shall be plywood or tongue and groove lumber.

The provision of this “NOTE” is also contained in existing Section 5254(c)(7)NOTE of the GISO that is proposed for repeal. This “NOTE” is proposed for repeal as the ATF regulations, that are proposed for adoption as new Section 5253.1 of the GISO for the construction of explosive storage magazines, are no longer specific to this type of construction and therefore, are unnecessary. California employers will no longer have to comply with a regulation enforced only in California.

Existing subsection (a)(8) requires that every first-class magazine be constructed to prevent penetration of a 180 gr., 30 caliber soft nosed hunting type bullet, when propelled at a maximum velocity of 2700 fps, when fired at a distance of not to exceed 100 feet. The EXCEPTION to subsection (a)(8) exempts magazines used only for the storage of blasting agents, Class B and Class C explosives.

Subsection (a)(8) and the EXCEPTION are proposed for repeal as similar provisions are contained in Section 5253.1(a)(1) and therefore, is unnecessary.

Existing subsection (b) requires the door to be bullet resistant construction and lockable with a protector such as a steel hood over the lock to minimize the possibility of tampering with the lock.

Subsection (b) is proposed for repeal as similar provisions are contained in existing Section 5254(d) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(a)(1) and (a)(1)(G). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (c) requires that the floors of the magazines are to be securely fastened and capable of withstanding the loads imposed.

Subsection (c) is proposed for repeal as similar provisions are contained in existing Section 5254(e) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(a)(1)(C). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (d) permits building type magazine walls and roofs to be made of wood covered with No. 26 U.S. Standard gauge metal. If there is a possibility that a bullet could be fired directly through the roof into the magazine, the roof construction would have to meet the requirements of subsection (c) or a four inch deep layer of sand would have to be placed on the roof, covering the entire magazine ceiling area.

## Initial Statement of Reasons Explosives Reorganization

Subsection (d) is proposed for repeal as its provisions are contained in existing Section 5254(f) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(a)(1)(E). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (e) addresses the requirements for ventilation to minimize dampness and the heating of stored explosives. Also, the regulation is specific in the wire mesh size and wire gauge to be used to screen the ventilation openings.

Subsection (e) and the accompanying “NOTE” referencing Pamphlet No. 1, published by the Institute of Makers of Explosives, 1965 Edition, as evidence of good practice with respect to ventilation, are proposed for repeal as their provisions are contained in existing Section 5254(g) and (g)NOTE of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(a)(1)(D), (f), and (f)NOTE. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (f) requires magazines to have a smooth finish without cracks or crevices with all nails or fasteners countersunk. It also requires that materials capable of emitting sparks shall be covered so as not to come into contact with packages of explosives.

Subsection (f) is proposed for repeal as similar provisions are contained in existing Section 5254(h) of the GISO that is proposed for transfer with revisions to proposed Section 5256 as new subsection (n). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (g) states that no first class magazine shall be located under a high voltage power line and gives the definition of the word “under”.

Subsection (g) is proposed for repeal as Section 5251(g) of the GISO already contains similar provisions and therefore, is unnecessary.

Existing subsection (h) requires that electrical installations comply with Title 24, Part 3, for Class II, Division 1 locations.

Subsection (h) is proposed for repeal as Section 5256(c) of the GISO already contains similar provisions and therefore, is unnecessary.

Existing subsection (i) requires that magazines constructed of metal be electrically bonded and grounded.

Subsection (i) is proposed for transfer to proposed Section 5251 as new subsection (q). This proposal is necessary to ensure retention of the existing TSO regulation within the GISO.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (j) requires signs containing specific warnings and of a given color with minimum letter size to be posted at the approach to the explosive storage magazine.

Subsection (j) is proposed for repeal as similar provisions are contained in existing Section 5254((i) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(f). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

The “NOTE” that follows existing subsection (j) provides a grandfather clause for portable magazines that were constructed before May 21, 1971 if certain provisions are taken to protect the magazine. The provision of this “NOTE” is also contained in existing Section 5254(c)(7) of the GISO that is proposed for repeal. This “NOTE” is proposed for repeal as the ATF regulations, that are proposed for adoption as new Section 5253.1 of the GISO for the construction of explosive storage magazines, no longer are specific to this type of construction and therefore, are unnecessary. California employers will no longer have to comply with a regulation enforced only in California.

In summary, the provisions in proposed new Section 5253.1 will include Federal OSHA and Bureau of Alcohol, Tobacco, and Firearms wall construction requirements. Bureau of Alcohol, Tobacco, and Firearms is the lead federal agency regarding the storage of explosive materials. These regulations are enforced nationwide and their incorporation ensures California’s regulations are consistent with the federal regulations. Therefore, this proposal is necessary to require the regulated public to provide safeguards consistent with federal mandates.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8517.)**

Section 8518. Second-Class Magazines.

Existing subsection (a) states what a second-class magazine will be and the type of materials it can be constructed of.

Existing subsection (b) requires that second-class magazines be constructed of specific dimensioned lumber, plywood, or steel over plywood or material having equal strength and fire resistance.

Existing subsection (c) requires that second-class magazines in buildings be located for easy removal in the event of a fire.

Existing subsection (d) requires the magazine be painted red and have white lettering of a specific dimension stating “EXPLOSIVES.” Existing subsection (e) requires second-class magazines containing explosives located where no one is in attendance shall be adequately secured to prevent theft.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (f) permits magazines that are not fire resistant when they are located more than 50 feet from combustible material.

The provisions of subsections (a) through (e) are proposed for repeal as similar provisions are contained in existing Section 5255(a) through (e) of the GISO that is proposed for transfer with revisions to proposed new Section 5253.1(b) and (c); (b), (c), (d), and (e); (b)(1)(D); (b)(1)(E); and (b)(1) of the GISO, respectively. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsection (f) is proposed for repeal as its provisions are contained in existing Section 5255(f) of the GISO that is also proposed for repeal. It is not industry practice to construct second-class magazines that are not fire resistant, and therefore, these provisions are unnecessary.

In summary, the provisions in proposed new Section 5253.1(a) of the GISO will include Federal OSHA and Bureau of Alcohol, Tobacco, and Firearms wall construction requirements. Bureau of Alcohol, Tobacco, and Firearms is the lead federal agency regarding the storage of explosive materials. These regulations are enforced nationwide and their incorporation ensures California's regulations are consistent with the federal regulations. Therefore, this proposal is necessary to require the regulated public to provide safeguards consistent with federal mandates.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8518.)**

Section 8519. Storage Within First-Class Magazines.

Existing Section 8519 requires that first-class magazines be kept clean and free of rubbish. First-class magazines are not to be used as storerooms except for equipment incidental to explosives handling. Other requirements include using specific portable lighting within the magazine; how to stack packages of explosives; using the oldest explosive first; ensuring all primers and capped fuses are used as soon as reasonably possible after making; not packing or unpacking containers of bulk explosives within 50 feet of the magazine and securely fastening the container cover before returning the container to the magazine; removing all explosives from the magazine, placing them in another magazine, and cleaning the floors before repairs to the inside of the magazine are initiated; and ensuring that where there is a possibility of sparks when working on the outside of the magazine that the explosives are removed from the magazine first.

Section 8519(a) through (i) is proposed for repeal in its entirety, as its provisions duplicate the requirements contained in Section 5256(a) through (i) of the GISO, respectively, and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8519.)**

Initial Statement of Reasons  
Explosives Reorganization

Section 8520. Makeup or Primer House for Blasting Operations.

Existing Section 8520 states where primers are to be made up and stored; how many pounds of explosives may be stored in a makeup house; how many primers of each delay may be stored; and, permits primers to be made up in a separate building provided appropriate magazines are provided for the explosives, detonators and primers.

Subsections (a), (a)(1) through (a)(3), and (b) are proposed for repeal as their provisions are contained in proposed Section 5257(b), (b)(1) through (b)(3), and the NOTE to subsection (c) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8520.)**

Section 8521. Storage of Explosives Underground.

Existing Section 8521 prohibits the storage of explosives in underground work areas during construction.

Section 8521 is proposed for transfer to proposed Section 5258(c) of the GISO. This proposal is necessary to ensure retention of the existing TSO regulation within the GISO specific to underground operations.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8521.)**

**Article 22. Transportation of Explosives.**

Section 8525. General.

Existing subsection (a) exempts transportation of explosives under the jurisdiction of USDOT, the California Highway Patrol, the California Vehicle Code, or the Health and Safety Code on Public Highways.

Existing subsection (b) prohibits the transportation of explosive initiation devices with radio transmitting devices unless they have been tested and proven safe for transportation under those circumstances by a laboratory approved by the State Fire Marshal.

Existing subsection (c) prohibits the transportation of blasting caps in any vehicle carrying more than 5,000 pounds of explosives.

This section is proposed for repeal as the provisions of subsections (a), (b), and (c) duplicate the requirements contained in existing subsections (a), (b), and (c) of Section 5262 of the GISO, respectively, that are proposed for revisions and explained in the

Initial Statement of Reasons  
Explosives Reorganization

GISO. Therefore, this proposal to repeal this section is necessary to eliminate duplicative provisions already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8525.)**

Section 8526. Surface Transportation.

Existing subsection (a) requires that vehicles transporting explosives or blasting agents are to have placards with specific legends/signs of definite size and color at specified locations on the vehicle.

Existing subsection (b) prohibits the transportation of electric blasting caps and capped fuses with explosives unless they are in separate compartments, with an air gap of at least 25 inches between the compartments.

Existing subsection (c) states the vehicle is to be in good working order and the load secured, have no sparking metal in the cargo space, and additional requirements if the vehicle has an open body.

Existing subsection (d) states the vehicle is to be equipped with a 4-BC unit or equivalent Underwriter's approved fire extinguisher.

Existing subsection (e) states, unless protected from damage, containers of explosives are not to be transported with other equipment not incidental to the explosive operation. The exception is for special service trucks equipped as necessary to carry small amounts of explosives provided they are safeguarded as required by subsection (b), (c), and (d).

Existing subsection (f) requires only the driver and employees necessary for the operation of the vehicle to be allowed on the vehicle carrying explosives.

Existing subsection (g) states no service or repairs using flame-producing devices are to be accomplished on the vehicle while transporting explosives.

Existing subsection (h) states explosive carrying vehicles shall comply with the Quantity Distance Table when stored.

Existing subsection (i) states that the driver shall not leave the vehicle cab until the motor is stopped and the brakes are set and reasonable precautions are taken to prevent the movement of the vehicle.

Existing subsection (j) states that explosives shall not be left unattended during transportation. The attendant must be trained in the hazards of explosives and have an emergency plan.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (k) states explosives or detonators are not to be transported on locomotives.

Existing subsection (ℓ) states vehicles containing explosives or detonators shall not be taken to a repair garage or shop for any purpose.

Subsections (a), (b), (c), (d), (e), (g), (h), (i), and (k) are proposed for repeal as these provisions are already contained in the proposed revisions to Section 5262(d), (c), (f), (g), (h), (k)(1), (ℓ), (m), and Section 5266(c), respectively, and therefore, are unnecessary.

Subsection (f) is proposed for repeal as its provisions are already contained in existing Section 5263(f) of the GISO that is proposed for transfer with revisions that are explained in the GISO to proposed Section 5262(j). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (j) states that explosives shall not be left unattended during transportation and requires the attendant to be trained in the hazards of explosives and have an emergency plan.

Subsection (j) is proposed for repeal as these provisions are contained in proposed Section 5262(i), (n), and (s) of the GISO. This proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (ℓ) states that vehicles containing explosives or detonators shall not be taken to a repair garage or shop for any purpose.

Subsection (ℓ) is proposed for transfer to proposed Section 5262(k). Subsections (i), (k), and (m) are specific to the attendance of the driver of vehicle transporting explosives, ensuring the vehicle is secured and brakes set, and prohibiting flame producing equipment to be used on the vehicle. Therefore, the transfer of this regulation merely clarifies the intent of the collective requirements of subsections (i), (k), and (m) as practices in the construction, mining, and tunneling industries. This practice or prohibition is also applicable in the general industry.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8526.)**

Section 8527. Transportation of Explosives—Underground—General.

Existing subsection (a) states that explosives shall not be left on the station level near the shaft collar or tunnel entrance, but shall be taken to the place of use or storage without delay.

Existing subsection (b) requires that detonators, capped fuses or other explosives being transported be in substantially constructed containers with tight fitting covers of materials

Initial Statement of Reasons  
Explosives Reorganization

acceptable to the Division. A “Note” to existing subsection (b) is provided that states original cases or DOT containers are acceptable except for primers.

Existing subsection (c) states that detonators, primers, or capped fuses shall not be transported in the same container or compartment with other explosives.

Existing subsection (d) requires each primer to be transported in a partitioned, non-metallic container.

Existing subsection (e) states that explosives are not to be transported with materials or equipment other than those used in blasting.

Subsections (a), (b), (b)Note, (c), (d), and (e) are proposed for repeal as their provisions are contained in proposed Section 5264(a), (b), (b)NOTE, (c), (d), and (e) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8527.)**

Section 8528. Transportation of Explosives—Hoisting or Lowering.

Existing subsection (a) permits only authorized persons to ride any shaft conveyance transporting explosives.

Existing subsection (b) requires that the hoist operator be notified that explosives are being transported.

Existing subsection (c) requires that the explosive be in an appropriate conveyance.

Existing subsection (d) specifies that hoisting operations in adjacent shafts be discontinued while explosives are being handled.

Existing subsection (e) prohibits the hoisting or lowering of detonators, primers, and powder in the same cage, skip, or bucket unless in a powder car.

Existing subsection (f) states that explosives are not to be lowered or hoisted with other materials, supplies, or equipment. The explosives are to be promptly transferred to the powder car and not be stacked or stored around the shaft collar or station.

Subsection (a) through (c) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5265(a) through (c) of the GISO, respectively, and therefore, are unnecessary.

Subsection (d) is proposed for transfer to new Section 5265(d) of the GISO. The reference to shifts, muck, and ore refer only to the mining and tunneling industries. Therefore, the transfer of this requirement is necessary to ensure the safety and well-being of construction workers in the mining and tunneling industries.



Initial Statement of Reasons  
Explosives Reorganization

Subsections (e) and (f) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5264(c) and Section 5264(a) and (e) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8528.)**

Section 8529. Rail Transportation of Explosives—Underground

Existing Section 8529(a) through (f) permits only the train crew and powder men to ride on a train transporting explosives; requires that explosives in quantities of 100 pounds or more be in special powder cars; prohibits explosives from being transported on the locomotive and requires the powder train be limited to the powder car and the locomotive; requires the special powder car to be labeled; prohibits the powder car from being pushed, except when switching or on a dead end line; and requires the primers to be placed in the primer compartment of the powder car in the appropriate box and primer and powder compartments are to be separated by at least 25 inches of air space.

Subsections (a) through (f) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5266(a) through (f) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8529.)**

Section 8530. Transportation of Explosives—Underground—Special Trackless Vehicles.

Existing Section 8530(a) through (e) require that trackless vehicles used to transport explosives underground are truck type vehicles without dump bodies; that they are especially equipped for that purpose and maintained in compliance with these orders; that they are lined with nonconductive materials and equipped with closed compartments to carry the explosives; that the vehicle has signs on the sides, front and rear with specific wording and lettering size; and is equipped with a flashing red light that is visible from the front and rear.

Subsection (a) is proposed for repeal as its provisions are contained in existing Section 5267(a) of the GISO that is also proposed for repeal. The provisions of proposed Section 5267(a) and (b) are specific regarding the equipping of vehicles for the addressed purpose such as closed compartment that prevents accidental dumping. This proposal is necessary to eliminate a regulation that is contained in the provisions of proposed Section 5267(a) and (b). Therefore, existing subsection (a) is unnecessary.

Subsections (b) through (e) are proposed for repeal as their provisions are contained in Section 5267(a) through (d) of the GISO, respectively, and therefore, are unnecessary.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsections (f), (g), and (h) prohibit the carrying of rock, ore, or other materials not necessary for the blasting operation, permits only the vehicle operator and blaster on the vehicle, and requires the electrical system of the trucks used to transport explosives to be checked and a certification record maintained.

Subsection (f) is proposed for repeal as its provisions are contained in existing Section 5267(f) of the GISO that is also proposed for repeal as proposed Section 5262(h) already contains this provision. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsection (g) is proposed for repeal as its provisions are contained in existing Section 5267(g) of the GISO that is proposed for transfer to proposed Section 5262(i). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsection (h) is proposed for repeal as its provisions are contained in proposed Section 5262(f)(4) of the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8530.)**

Section 8531. Transportation of Explosives—Manual.

Existing Section 8531 requires that manually transported explosives be carried in suitable bags or containers. Additionally, detonators and primers are to be transported in separate bags or containers.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5268(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8531.)**

**Article 23. Handling and Use of Explosives—Blasting Operations.**

Section 8535. General.

Existing subsection (a) requires an authorized competent person to be in charge of blasting.

Subsection (a) is proposed for repeal as its provisions are contained in proposed Section 5238(a) of the GISO and therefore, is unnecessary.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) prohibits smoking or open flames within 50 feet of any area where explosives are being handled.

Subsection (b) is proposed for repeal as its provisions are contained in Section 5276(a) of the GISO and therefore, is unnecessary.

Existing subsection (c) permits only energized power cables or sources of ignition that are necessary to the loading and firing operation to be in an area where there are loaded holes.

Subsection (c) is proposed for repeal as its provisions are contained in existing Section 5276(c) that is also proposed for repeal. Section 5276(a) and (d) and Section 5299(e) and (g) of the GISO already contain the provisions of subsection (c) and therefore, subsection (c) is unnecessary.

Existing subsections (d), (e), (g), and (h) require that only appropriate tools be used to open explosive containers; paper cartons, sawdust and rubbish from explosives containers be removed to a safe place; all leftover explosives and initiating devices are to be returned to their proper magazines; and, blasting mats are to be used where there is the possibility of flying rock or material damaging other property.

Subsections (d), (e), (g), and (h) are proposed for repeal as their provisions are contained in Section 5276(b), (c), (e), and (f) of the GISO, respectively, and therefore, are unnecessary.

Existing subsection (f) prohibits explosives to be placed or left within 5 feet of an electric light circuit or electric power circuit except during transportation.

This provision is proposed for repeal as proposed Section 5276(d) of the GISO contains this requirement with proposed revisions that explosive materials shall not be placed within 25 feet of exposed electrical circuits except during transportation. This proposal is necessary to be consistent with industry practice to maintain at least 25 feet of clearance from all electrical circuits as any electrical circuit is a potential ignition source.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8535.)**

Section 8536. Tamping Poles and Devices.

Existing Section 8536 requires that tamping poles are made of wood or acceptable plastic materials; the end of the tamping pole is square and of a size that will not bypass the cartridge in the hole; the wooden tamping poles have no metal parts, except for non-ferrous metal ferrules for extending the length of the pole; and plastic poles are not used unless accepted by the Division. A “NOTE” is included explaining why some plastics cannot be used for tamping poles.

Initial Statement of Reasons  
Explosives Reorganization

Subsections (a), (b), and (c) are proposed for repeal as their provisions are contained in Section 5277(a), (b), and (c) of the GISO, respectively.

Subsection (d) and the “NOTE” to subsection (d) are proposed for repeal as these provisions are contained in existing Section 5277(d) and the “NOTE” to subsection (d) of the GISO. The existing provisions of Section 5277(d) and the “NOTE” to subsection (d) are proposed for transfer with proposed revisions that are explained in the GISO to proposed Section 5277(a) and as a new “NOTE” to subsection (a). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8536.)**

Section 8537. Loading Explosives—General.

Existing subsections (a) through (o) contain the requirements necessary to perform a safe explosive loading operation. The regulations address requirements concerning when loading is to commence and the condition of the bore holes; vehicular traffic; number of persons at the loading site; amount of explosives to be delivered at the site; and the minimum strength of detonators to be used. Also, the regulations require that the detonator be encased with explosives; tamping to be done with light blows, if required; holes stemmed to sufficiently confine the charge; and stacks of explosives to be spaced to prevent propagation of an explosion. The regulations specify a distance to be maintained from a charged hole when springing a hole, the sprung hole is to cool before being loaded, and drop fuses are not to be used. The regulations state that charged holes cannot be deepened; blasting is to take place as soon as possible after charging has taken place; and explosives are to be separated from primers until charging takes place. The regulations state that only non-sparking implements are to be used to punch holes in an explosive cartridge and provisions are required to prevent unauthorized entry into an area containing charged holes.

Subsections (a) through (o) are proposed for repeal as their provisions are contained in Section 5278(a), (c), (d), (e), (f), (g), (h), (i), (j), (k) and (ℓ), (m), (o), (p), (r), and (s) of the GISO, respectively, and therefore, are unnecessary.

Subsection (p).

Existing subsection (p) requires all detonators of a round to be of the same brand.

Subsection (p) is proposed for repeal as its provisions are contained in existing Section 5278(u) that is proposed for transfer to proposed Section 5299(j) of the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Subsections (q) through (s).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsections (q) through (s) require the use of a double trunkline or loop system for detonating cord blasting. Trunklines in multiple row blasts are to make one or more complete loops with cross ties at intervals not to exceed 200 feet. All detonating cord knots are to be tight and the connections kept at right angles to the trunklines.

Subsections (q) through (s) are proposed for repeal as their provisions are contained in Section 5278(t) through (v) of the GISO, respectively, and therefore, are unnecessary.

Subsection (t).

Existing subsection (t) requires that flood lights be used for illumination. If the current for the flood lights comes from the locomotive, the locomotive will be at least 50 feet from the loading operation.

Subsection (t) is proposed for transfer to proposed Section 5278(b) of the GISO. This proposal is necessary to ensure retention of the existing TSO regulation within the GISO.

Subsections (u) through (w).

Existing subsection (u) prohibits smoking and open flames in areas where loading operations are in progress.

Existing subsection (v) permits only those persons necessary for the loading operation at the site.

Existing subsection (w) prohibits connecting the lead wires to the permanent shot firing line until all persons have retreated from the site. All work is to stop at the face during loading and after loading until the shot is fired.

Subsections (u) through (w) are proposed for repeal as their provisions are contained in Sections 5276(a), 5278(d), and 5304(c) and (d), respectively, and therefore, are unnecessary.

Subsection (x).

Existing subsection (x) requires a wait of at least 5 minutes before returning to the face after a shot. The blasting switches must be in the off position in addition to returning the shot line to the pre-firing conditions.

The first portion of subsection (x) is proposed for transfer to proposed Section 5291(j) of the GISO. This proposal is necessary to ensure retention of the existing TSO regulation within the GISO. Also included in subsection (x) is an advisory statement that states additional waiting time may be required for the ventilation system to clear the air. This statement is proposed for repeal as Group 16 of the GISO, beginning with Article 107, is specific to the control of hazardous substances, including dust, fumes, mists, vapors, and gas, and therefore, the advisory statement is unnecessary.

Initial Statement of Reasons  
Explosives Reorganization

The second portion of subsection (x) is proposed for repeal as its provisions are contained in existing Section 5304(g) that is proposed for transfer to proposed Section 5304(f). Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8537.)**

Section 8538. Loading and Blasting Near and Under Power Lines.

When surface blasting under or near overhead power lines, existing Section 8538 requires that leading wires be placed at right angles to power lines and anchored to prevent the circuit conductors from being thrown into the overhead lines. Additionally, the loaded holes are to be covered with a nonconductive blasting mat that is to be anchored to prevent it or other material from being blown into the overhead lines.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5279(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8538.)**

Section 8539. Pneumatic Loading of Explosives and Blasting Agents.

Existing Section 8539 contains general information that this regulation applies to all devices, appurtenances, operations, and procedures used in charging bore holes or other cavities with an explosive or blasting agent by means of compressed air. This section contains those requirements to be complied with when charging bore holes with explosives or blasting agents. The regulation gives parameters regarding use of construction material and requires the vessel that is pressurized on an air loader be designed, constructed, inspected, and stamped as meeting the requirements of the Unfired Pressure Vessel Safety Orders. There are requirements for a mesh screen, air trap or a filter to be installed on the air supply line. The air temperature is to be maintained below 150 degrees Fahrenheit and there is to be a pressure relief valve set no higher than 55 pounds per square inch pressure. The equipment is to be grounded using at least #8 American Wire Gauge straps or cables connected to a ground rod. Specific resistance limits are listed. Prior to attaching the loader, the air line shall be blown out and the material poured into a pressure type loader shall be passed through a one-half inch opening screen. Air loaders used to place stemming shall be cleaned before and after such use.

The first paragraph of Section 8539 is proposed for repeal as this information is contained in existing Section 5280(a) which is proposed for repeal as it is informational only and therefore, unnecessary. Subsections (a), (a)(1), (a)(2), and (a)(3); (b) and

Initial Statement of Reasons  
Explosives Reorganization

(b)(1) through (4); (c) and (c)(1) through (3); (d), (d)(1) [except for the last sentence of subsection (d)(1)], (d)(2), and (d)(3); and (e) and (e)(1) through (3) are proposed for repeal as these provisions duplicate the requirements of proposed Section 5280(a), (a)(1), (a)(2), and (a)(3); (b) and (b)(1) through (4); (c) and (c)(1) through (4); (d), and (d)(1) through (4); and (e) and (e)(1) through (3) of the GISO, respectively, and therefore, are unnecessary.

The last sentence of subsection (d)(1) which requires that pneumatic loading equipment shall not be grounded to water lines, air lines, rails, or other permanent electrical grounding systems is proposed for transfer to Section 5280(d)(3) of the GISO. This proposal is necessary because the GISO does not have regulations that are specific to the auxiliary equipment that could become energized by external sources or through static electricity. The intent of the transfer is to be consistent with the general provisions of Section 5299(a) of the GISO to mitigate the hazards of static electricity and extraneous current.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8539.)**

Section 8540. Firing of Explosives.

Existing Section 8540 requires that the employer or a delegated representative determine the time of blasting. Signals are to be given and assurance that all explosives and persons are in a safe place and a safe distance or under cover before the blast is fired. Warning signals, such as horns, voice communication or flaggers, shall be given before the blast.

Subsections (a) through (d) are proposed for repeal as these provisions are contained in Section 5291(a) through (d) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8540.)**

Section 8541. Secondary Blasting.

Existing Section 8541 prohibits activity of any kind that creates a hazard to explosives during secondary blasting operations and requires the use of detonating fuse or instantaneous blasting caps when shots to be fired are in such close proximity that one shot could displace another.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5292(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8541.)**

Initial Statement of Reasons  
Explosives Reorganization

Section 8542. Misfires.

The introductory sentence of existing Section 8542 provides information stating that misfires is the most hazardous operation associated with blasting operations.

This statement is proposed for repeal as it is informational only and therefore, is unnecessary.

Existing subsection (a) requires that the shot area be examined for misfires after each blast and, if misfires are found or suspected to exist, they will be reported to the appropriate person.

Subsection (a) is proposed for repeal as its provisions are contained in Section 5293(a) of the GISO and therefore, is unnecessary.

Existing subsection (b) requires, where possible, that the number of explosives charges in each blast is to be counted and compared to the number of explosions heard.

Subsection (b) is proposed for repeal as the phrase “Where possible” is vague, in addition to the fact that it is not possible to accurately count the number of explosions in a blast sequence. This proposed action is necessary to eliminate vague and unenforceable regulations.

Existing subsection (c) requires a 30 or 60-minute wait, depending on the type of initiating system used, if a misfire occurs. Included in the regulation are two methods by which the misfire can be neutralized or the detonator and cap sensitive explosives can be removed.

Subsection (c) is proposed for repeal as its provisions are already contained in Section 5293(b)(1) through (b)(3) of the GISO and therefore, is unnecessary.

Existing subsection (d) prohibits the drilling of blast holes if there is a danger of intersecting a charged hole of misfired explosives.

Subsection (d) is proposed for repeal as its provisions are already contained in proposed Section 5293(d) of the GISO and therefore, is unnecessary.

Existing subsection (e) prohibits any other work to take place in the area during the mitigation of a misfire and states that only the necessary crew is to be on site.

Subsection (e) is proposed for transfer to Section 5293 as new subsection (c) of the GISO. The proposed transfer of this requirement for explosives suspected of burning in the hole is necessary as this condition is a greater hazard than a misfire. Material that has been ignited and is burning has a greater propensity to “explode” than a “shot” in which ignition never occurred.



**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8542.)**

Section 8543. Coyote Hole Blasting.

Existing subsection (a) prohibits electric lighting circuits within a coyote hole while it is being loaded.

Existing subsection (b) requires that the ends of lead wires be shorted until ready to blast. Also, the circuits are to be tested every 10 feet if stemming is placed in the crosscuts or before each explosive charge is placed.

Existing subsection (c) requires that when detonating cord is used, a double line of cord with frequent cross ties will be used so the detonating wave can reach each explosive charge from 2 independent sources.

Existing subsection (d) requires coyote holes be backfilled tightly and for sufficient length to prevent a blown out shot.

Existing subsection (e) requires the blast area to be plainly marked at specific locations when being loaded with appropriate warning signs.

Subsections (a) through (e) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5294(a) through (e) of the GISO, respectively, therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8543.)**

Section 8544. Use of Safety Fuse—General.

Existing subsection (a) requires the use of safety fuse for fuse cap blasting.

Existing subsection (b) requires tests to be made to determine the average burning rate for the safety fuse. The regulation is specific in the lengths of fuse to be tested and the deviation from the average burning rate that is acceptable.

Existing subsection (c) requires a notice to be prominently posted at the work site stating the fuse burning rate.

Existing subsection (d) prohibits the use of hammered or damaged fuse.

Subsection (a) through (d) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5295(a) through (d) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8544.)**

Section 8545. Safety Fuse Storage.

Existing subsection (a) requires the safety fuse to be warmed slightly before being uncoiled when used in cold weather.

Existing subsection (b) prohibits safety fuse storage underground except when the storage area is dry and the relative humidity is less than 80%.

Existing subsection (c) prohibits safety fuse from being hung on anything that could cause a sharp bend to be formed in the fuse.

Subsections (a) through (c) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5296(a) through (c) of the GISO, respectively, and therefore, are unnecessary.

Existing subsection (d) requires fuse and igniters to be stored in a cool, dry place away from oil and grease.

The provisions of subsection (d) are proposed for transfer into Section 5296 as proposed subsection (b) of the GISO. This proposal is necessary to ensure that safety fuse is maintained in a cool location to prevent hardening of the fuse covering, thus preventing cracking which could result in poor fuse burn and also to ensure the fuse is not contaminated by oil or grease which would change the fuse burning characteristics. This proposed transfer is necessary to ensure the specificity of the mining regulation is maintained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8545.)**

Section 8546. Making Capped Fuses and Primers.

Existing subsection (a) requires that at least one inch of fuse be cut from the end of each coil before capping safety fuse to prevent damp fuse from being placed into the cap.

Existing subsection (b) requires blasting caps to be kept in their original or equivalent container except when they are used.

Existing subsection (c) requires only tools designed for that purpose be used for attaching the blasting cap to the safety fuse. The tool shall be readily accessible.

Existing subsection (d) requires the use of a waterproof ring type crimp or compound when necessary.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (e) prohibits the use of a half hitch to attach the capped fuse to the primer cartridge.

Existing subsection (f) requires that fuses be cut and capped in a safe, dry location posted as a no smoking area.

Included in existing Section 8546 are sketches showing recommended methods for attaching capped fuses to primer cartridges. There is a note following the sketches that gives further instructions on how the safety fuse is to lay when using the lacing method.

Subsections (a) through (e) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5297(a), (b), (c), (e), and (f) of the GISO, respectively, and therefore, are unnecessary.

The provisions of subsection (f) are proposed for transfer to Section 5297 as new subsection (d). The proposed action is necessary to clearly indicate that safety fuse which is an explosive material and therefore included in the general storage requirements is to be maintained free of oil or grease contamination. This proposal also ensures retention in the GISO the provisions of an existing TSO regulation.

The sketches for the Recommended Methods of Attaching Capped Fuse to Primer Cartridge and accompanying note regarding safety fuse primer are proposed for repeal as these provisions are already contained in existing Section 5297(e) of the GISO that is proposed for transfer to revised Section 5297 as a new subsection (g) with revisions that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8546.)**

Section 8547. Blasting with Safety Fuse—Hazards of Blasting with Safety Fuse.

Existing Section 8547 contains a preamble describing the hazards of blasting with safety fuse.

Existing subsection (a) prohibits the igniting of safety fuse before the explosive charges are in place unless cleared by the Division.

Existing subsection (b) requires consideration be given regarding length and burning rate of fuse, condition of the escape route, and the distance to the place of safety.

Existing subsection (c) requires the safety fuse to extend at least three feet beyond the collar of the hole.

Initial Statement of Reasons  
Explosives Reorganization

The “NOTE” to existing subsection (c) states that a 3 foot safety fuse will fire a shot in about 2 minutes.

Existing subsection (d) permits only a single shot when using three-foot safety fuses.

Existing subsection (e) requires at least a two-minute delay between igniting the last fuse and the time the first charge explodes.

Existing subsection (f) considers the lighting of 2 or more safety fuses in a group using an igniter cord to be the same as lighting one fuse. No one employee may light more than 12 safety fuses in succession.

Existing subsection (g) prohibits entry into a blast area after the blast for at least 2 minutes when three or more safety fuses are lighted at one time.

Existing subsection (h) requires the presence of two men when lighting safety fuses.

Existing subsection (i) permits only devices designed to ignite safety fuse to be used.

The preamble to Section 8547 is proposed for repeal as it is informational only and therefore, is unnecessary.

The provisions of subsection (a) through (i), with the exception of the “NOTE” to subsection (c), are proposed for repeal as these provisions are contained in proposed Section 5298(a)(1), (a)(2), (a)(4), (a)(5), (a)(6), (a)(7), (a)(8), (a)(9), and (a)(10) of the GISO, respectively, and therefore, are unnecessary.

The “NOTE” to subsection (c) stating that a 3-foot safety fuse will fire a shot in about 2 minutes is proposed for transfer to Section 5298(a)(4)NOTE of the GISO. This proposal is necessary to ensure the employer is furnished this information as the GISO does not presently contain this information as a “NOTE”.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8547.)**

Section 8548. Firing with Electricity—General.

Existing subsection (a) prohibits electric blasting operations to be done when it is known there are stray electrical currents in the area sufficient to detonate the electric blasting caps being used.

Subsection (a) is proposed for transfer with revisions to proposed Section 5299 as new subsection (a) of the GISO. This proposal is necessary to further clarify the intent of several regulations within the GISO (i.e. Sections 5276, 5306, and 5314).

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) permits the use of listed blasting devices or other means acceptable to the Division.

Subsection (b) is proposed for repeal as its provisions duplicate the requirements of Section 5299(b) and therefore, is unnecessary.

Existing subsection (c) prohibits the use of dry cell batteries for more than a single detonation. The dry cell batteries used for this purpose cannot have exposed terminals.

Subsection (c) is proposed for repeal as its provisions duplicate the requirements contained in the proposed revisions to Section 5299(b) of the GISO that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions that are contained in the GISO.

Existing subsection (d) permits firing with referenced devices, if the connections are as recommended by the manufacturer. When firing with a light or power circuit, the accompanying examples are to be used.

Subsection (d) is proposed for repeal as its provisions duplicate the requirements contained in the proposed revisions to Section 5299(c) of the GISO that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions that are contained in the GISO.

Existing subsection (e) delineates the amperage to be used to activate an explosion. In addition, subsection (e) contains a “NOTE” stating the minimum permissible amperages to be used for direct and alternating currents, series and parallel circuits, and when igniter cord is used with electric starters.

Subsection (e) is proposed for repeal as its provisions are contained in the proposed revisions to Section 5299(d) that are explained in the GISO and therefore, is unnecessary.

The “NOTE” to subsection (e) is proposed for repeal as its provisions are contained in existing Section 5299(d) NOTE of the GISO that is proposed for transfer to revised Section 5299(c) with revisions that are explained in the GISO. This proposal is necessary to eliminate duplicative provisions that are contained in the GISO.

Existing subsection (f) requires that blasting wires be kept clear of conductive materials and features, except the earth itself.

Subsection (f) is proposed for repeal as its provisions duplicate the requirements of Section 5299(e) of the GISO and therefore, is unnecessary.

Existing subsection (g) prohibits grounding of the blasting circuit leading from the firing switch to the blast area.

Initial Statement of Reasons  
Explosives Reorganization

Subsection (g) is proposed for repeal as its provisions duplicate the requirements of Section 5299(f) of the GISO and therefore, is unnecessary.

Existing subsection (h) prohibits the location of low-voltage electric power lines within 50 feet of loaded holes or if not possible to be moved, that they be de-energized before an electric detonator or starter is brought into the area. Where neither is possible, the area shall be checked for stray current.

Subsection (h) is proposed for repeal as its provisions duplicate the requirements of Section 5299(g) of the GISO and therefore, is unnecessary.

Existing subsection (i) requires the blasting circuit to be tested with a galvanometer before firing.

Subsection (i) is proposed for repeal as its provisions duplicate the requirements of Section 5299(h) of the GISO and therefore, is unnecessary.

Existing subsection (j) requires the circuit to remain shorted until the round is ready to test and fire.

Subsection (j) is proposed for repeal as its provisions duplicate the requirements of Section 5299(i) of the GISO and therefore, is unnecessary.

Existing subsection (k) delineates those areas where electric blasting may be used.

Subsection (k) is proposed for repeal as its provisions are contained in existing Section 5299(j) that is proposed for transfer to revised Section 5298(a)(3) of the GISO with revisions that are explained in the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions contained in the GISO.

Existing Section 8548 contains a series of diagrams showing examples of blasting circuits such as a diagram for series blasting, a diagram for parallel blasting, and a diagram for parallel-series blasting.

These series of diagrams are proposed for repeal as these examples of blasting circuits duplicate the examples of blasting circuits in Section 5299 of the GISO and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8548.)**

Section 8549. Firing Switches.

Existing subsection (a) requires that the firing switch conform to a list of six minimum requirements, addressing such things as exterior operation, that it is of double pole

Initial Statement of Reasons  
Explosives Reorganization

construction, short circuiting capabilities, minimum voltage ratings, mounting requirements, and where the leading and power line wires are to be attached.

Existing subsection (b) requires when firing by a light or power circuit, an air gap of at least 5 feet for underground operations and at least 15 feet for surface operations shall be provided except when firing. It further states how the air gap is to be established.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5300(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

The recommended provisions of subsection (c) regarding tunnel length and distance the shot firing switch is to be from the face are proposed for transfer to Section 5300 as proposed new subsections (c) and (d) of the GISO. This proposed action is necessary to make the existing recommendation a requirement. This proposal requires the employer to ensure the firing switch is placed at the minimum distances that are currently recommended and is currently used in the industry. In addition, this proposal ensures that these provisions are retained in the GISO.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8549.)**

Section 8550. Auxiliary Switches.

Existing subsection (a) requires one or more auxiliary switch at the beginning of each branch circuit of the permanent leading wires.

Existing subsection (b) requires the auxiliary switch(es) to be the same as described in Section 8549 except that they need not be fused.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 5301(a) and (b) of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8550.)**

Section 8551. Permanent and Temporary Leading Wires.

Existing subsection (a) requires all leading wires to be of copper or aluminum of a specified type and number.

Existing subsection (b) requires permanent leading wires to be installed in conduit or strung on insulators, kept at least 5 inches apart.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (c) requires the conductor used to close the air gap to be “S” cable or equivalent.

Existing subsection (d) is specific to the capacity and wire gage to be used for the leading wires.

Existing subsection (e) requires that all splice be insulated and intrinsically safe.

Included in existing Section 8551 are two diagrams for recommended power firing systems for series and parallel series firing, one with and one without a circuit interrupter.

Subsections (a) through (e) and the diagrams are proposed for repeal as their provisions duplicate the requirements of Section 5302(a) through (e) and the diagrams of Section 5302 of the GISO, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8551.)**

Section 8552. Blasting Procedure with Power and Light Circuits.

Existing subsection (a) requires that the keys for auxiliary and firing switches be under the control of the licensed blaster.

Subsection (a) is proposed for repeal as its provisions are contained in existing Section 5304(a) of the GISO that is proposed for transfer to Section 5299 as new subsection (k) with revisions that are explained in the GISO. This proposal is necessary to eliminate duplicative provisions that are already contained in the GISO.

Existing subsection (b) requires that the auxiliary switch is in the “off” position, the air gap is open, the short circuiting device is in place, and the firing switch is locked in the “off” position before connecting the leading wires to the leg wires.

Subsection (b) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(a) of the GISO and therefore, is unnecessary.

Existing subsection (c) requires that temporary leading wires be tested prior to attaching to the leg wires for the presence of stray electric current with an instrument designed for that purpose. The stray current, if detected, is to be eliminated before attachment is made.

Subsection (c) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(c) of the GISO and therefore, is unnecessary.

Existing subsection (d) requires all persons to leave the blast area to a safe location before connecting the leading wires.



Initial Statement of Reasons  
Explosives Reorganization

Subsection (d) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(d) of the GISO and therefore, is unnecessary.

Existing subsection (e) indicates when the area is clear of all persons, the person responsible for firing may prepare the switch for firing.

Subsection (e) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(e) of the GISO and therefore, is unnecessary.

Existing subsection (f) prohibits reentry into underground blast areas for at least 15 minutes after primary blasting.

Subsection (f) is proposed for repeal as its provisions are contained in existing Section 5304(f) of the GISO that is proposed for transfer to Section 5291(k) of the GISO. Therefore, this proposal is necessary to eliminate duplicative provisions already contained in the GISO.

Existing subsection (g) requires post-blast locking of all switches in the “off” position and the leading wires be disconnected from the power source.

Subsection (g) is proposed for repeal as its provisions are contained in existing Section 5304(g) of the GISO that is proposed for transfer to proposed Section 5304(f) of the GISO with revisions that are explained in the GISO. This proposal is necessary to eliminate duplicative provisions contained in the GISO.

Existing subsection (h) requires that in the event of a shot failure, the firing switch is locked in the “off” position; the air gap is opened; and the blaster waits at least 30 minutes before proceeding to the auxiliary switch, locking it in the “off” position, and entering the blast area.

Subsection (h) is proposed for repeal as the provisions of this subsection duplicate the requirements of Section 5304(g) of the GISO and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8552.)**

Section 8553. Blasting with Batteries, Blasting Devices, and Blasting Machines.

Existing subsection (a) requires the batteries and accessories for blasting operations be assembled in one unit. The units are to be acceptable to the Division and have no exposed live terminals. Also included in existing subsection (a) is a “NOTE” stating that the Division may accept battery blasting devices approved by the listed institutions.

Existing subsection (b) requires that the blaster be in charge of the blasting machine and equipment. Only the blaster will connect the leading wires to the battery housing.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (c) prohibits the leading wires to be connected to the blasting machine or battery until all necessary steps and safeguards have been done.

Existing subsection (d) requires the blaster to reverse the connecting process immediately after firing the round.

Subsections (a) through (d) are proposed for repeal as the provisions of these subsections duplicate the requirements in Section 5299(b) and Section 5305(a) through (c) of the GISO, respectively, and therefore, are unnecessary. The “NOTE” to subsection (a) that states the Division “may” accept battery-blasting devices approved by recognized institutions is proposed for repeal as it is informational only and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8553.)**

Section 8554. Electric Blasting in Proximity with Radio Transmitters.

Existing subsection (a) requires that a sign with a specific legend, with 4 inch lettering, and 5/8 inch stroke on a contrasting background be displayed prior to installation of electric sensitive devices. A “NOTE” in existing subsection (a) is included referencing the USDOT for specific sign requirements.

Existing subsection (b) requires signs to be posted approximately 1,000 feet from the blasting area on all public access.

Existing subsection (c) contains 5 tables with minimum distances that an operating mobile or fixed radio, television, or radar transmitter may be located from electric blasting operations. Also, included in Section 8554, is information on the recommended tables of distances.

Subsections (a) through (c) and Tables 1 through 5 are proposed for repeal as their provisions duplicate the requirements of Section 5306(a) through (c) and Tables 1 through 5 of the GISO, respectively and therefore, are unnecessary. In addition, the information on the recommended tables of distances is proposed for repeal as it duplicates the information in Section 5306 as a proposed “NOTE” and therefore, is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8554.)**

**Article 24. Licensing of Blasters.**

Section 8560. Competency of Blasters.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (a) requires a licensed blaster for blasting operations within the scope of these orders.

Subsection (a) is proposed for transfer to Section 5238(a) of the GISO. This proposal is necessary to clarify that a competent or qualified person is a licensed blaster.

Existing subsection (b) requires a licensed blaster to be physically present where the blasting operations are taking place. Also, the blaster is to direct and supervise the operation. The regulation then describes the incidentals involved in the blasting operation.

Subsection (b) is proposed for transfer to Section 5238(a) of the GISO. This proposal is necessary as all blasting operations within the CSO, MSO, and TSO require the presence of a licensed blaster and the GISO presently does not contain this requirement.

Existing subsection (c) permits a reasonable number of persons at least 18 years old to work under the direct supervision of the licensed blaster for the purpose of obtaining the necessary experience to qualify for a Blaster's License.

Subsection (c) is proposed for transfer to Section 5238(c)NOTE and Section 5276(g)EXCEPTION of the GISO. This proposal is necessary to clarify the circumstances under which individuals may train for a Blaster's License.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8560.)**

Section 8561. Blaster's License—Qualifications.

Existing Section 8561 states every person requesting a blaster's license shall meet the specified criteria.

This statement is proposed for transfer to Section 5238(f) of the GISO. This proposal is necessary to direct the reader to the following requirements.

Existing subsection (a) requires the applicant to be at least 21 years old.

Subsection (a) is proposed for transfer to Section 5238(f)(1) of the GISO. Although existing Section 5238(b) is already clear that the person in charge is to be at least 21 years old and this provision is proposed to be revised; therefore, this transfer is necessary to clearly indicate that the licensed blaster is to be at least 21 years old.

Existing subsection (b) requires the applicant to be able to understand and communicate understandably.

Subsection (b) is proposed for transfer to Section 5238(c) of the GISO. This proposal is necessary to ensure that the intent of Section 3203(a)(3), the requirement for an injury

Initial Statement of Reasons  
Explosives Reorganization

and illness prevention program, and the ability of the employees to be able to understand orders and directions are complied with.

Existing subsection (c) requires the applicant to furnish proof of being proficient in the knowledge and use of explosives and ancillary equipment or furnish proof of at least three years of experience as an assistant to a licensed blaster.

Subsection (c) is proposed for transfer to Section 5238(d)(1) and (f)(2). This proposal is necessary to ensure the applicant is informed of the minimum requirements to obtain a blaster's license.

Existing subsection (d) requires the applicant to be of good moral character and physical condition so as not to interfere with the performance of the duties and ability to direct/conduct blasting operations.

Subsection (d) is proposed for transfer to Section 5238(b), except for the language of the regulation that states the applicant must be of good moral character. This proposal is necessary to ensure the applicant is physically capable of performing the duties of a licensed blaster. The provision that states the applicant must be of good moral character is proposed for repeal as it is undefined as to what is considered good moral character and therefore, this provision is vague. Therefore, this provision is unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8561.)**

Section 8562. Blaster's License-Application and Examination.

Existing subsection (a) requires a completed application form to be submitted to the Division.

Existing subsection (b) requires the Division to evaluate the application based on the information given.

Existing subsection (c) requires the applicant to pass a written and oral examination that relates to the license classification requested. A field test may be considered necessary.

Existing subsection (d) contains the class, category, and description of the applicable classifications.

Existing subsection (e) permits the Division to place limitations on the blaster's license.

Existing subsection (f) prohibits transferring the blaster's license.

Subsections (a) through (f) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 344.20(a) through (f) of the California Occupational Safety and Health Regulations, respectively, and therefore, are

Initial Statement of Reasons  
Explosives Reorganization

unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8562.)**

Section 8563. Expiration and Renewal.

Existing subsection (a) states the blaster's license is valid for a period of 5 years with renewal privileges.

Existing subsection (b) requires the renewal application to be administered in the same manner as an original blaster's license. The examination is required every five years.

Subsections (a) and (b) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 344.21(a) and (b) of the Occupational Safety and Health Regulations, respectively, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8563.)**

Section 8564. Custody of Blaster's License.

Existing subsection (a) requires that the blaster's license be presented by the blaster to the employer as evidence of qualifications.

Existing subsection (b) requires the blaster to display the blaster's license upon request for inspection by the Division or other enforcement officials.

Subsections (a) and (b) are proposed for transfer to Section 5238(a) and (e) of the GISO, respectively. This proposal is necessary to ensure the employer is made aware that the blaster is to have a current license to perform blasting operations and must present it to the employer, and the Division, if requested.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8564.)**

Section 8565. Blasting Accident Reports and Procedures.

Existing Section 8565 contains reporting requirements for employers should there be a blasting accident or unusual occurrence affecting the safety of employees in which explosives are involved.

Existing subsection (a) requires that the Division be notified within 24 hours of the incident.

Initial Statement of Reasons  
Explosives Reorganization

Existing subsection (b) requires that the report identifies the blasters involved and the employees injured. The type of explosives and method of initiation are to be identified. An account of the incident shall be prepared.

Existing subsection (c) states that if a serious injury occurs, then the blasting operation will be discontinued until the Division has completed its investigation or authorized the resumption of work.

Existing subsection (d) requires the employer to notify the Division if the holder of the blaster's license is guilty of a breach of the provisions of this Article.

Existing subsection (e) prohibits the employer to direct the blaster to perform a blasting operation that violates a Title 8 regulation.

Subsections (a) through (c) are proposed for transfer to new Section 5248(a) through (c) of the GISO, respectively. This proposal is necessary to establish a consistent reporting policy for the employer as already required in the CSO, MSO, and TSO.

Subsections (d) and (e) are proposed for repeal. The provisions of subsections (d) and (e) are already required by Labor Code, Section 6403 and Section 3203 of the GISO, and therefore, are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8565.)**

Section 8566. Suspension—Blaster's License.

Existing subsection (a) gives reasons for which the Division may suspend a blaster's license. Grounds for suspension may include questions of competency or violations of Title 8 regulations.

Existing subsection (b) requires a notice be given and a hearing held before suspending or revoking a license.

Existing subsection (c) states that should the blaster's license be suspended or revoked, the individual is prohibited from applying for a new license for a period of six months.

Subsection (a) through (c) are proposed for repeal as the provisions of these subsections duplicate the requirements of Section 344.22(a) through (c) of the California Occupational Safety and Health Regulations, respectively, and therefore are unnecessary.

**(The corresponding sections/subsections are identified in the right hand column of the text of Section 8566.)**

Section 8567. Labor Code Excerpts.

Initial Statement of Reasons  
Explosives Reorganization

Existing Section 8567 refers to Appendix “B”.

This information is proposed for repeal as it references an appendix in the Tunnel Safety Orders that is proposed for repeal and therefore, is unnecessary.

Section 8568. Blaster’s License Fees.

Existing Section 8568 directs the reader to Chapter 3.2, Group 2, Title 8, California Code of Regulations, which are the Occupational Safety and Health Regulations, adopted and enforced by the Division. This paragraph also states that the blaster’s license fees are reprinted in Appendix C of these orders.

Section 8568 is proposed for repeal as it merely directs the reader to reprints and therefore, is unnecessary. Also, this section is proposed for repeal as the provisions of Labor Code, Section 7991 sets blaster’s license fees and therefore, is unnecessary.

**DOCUMENTS RELIED UPON**

1. West’s Annotated California Codes, Health and Safety Code, St. Paul, Minn., West Publishing Co., Chapter 4, Permits, Sections 12101 to 12118, pages 378 – 390.
2. State of California, 1995 Vehicle Code, Division 14, Transportation of Explosives, pages 896 – 902.
3. Mine Safety and Health Administration, 30 CFR, Code of Federal Regulations, Mineral Resources, Revised as of July 1, 1995, Subpart B, Requirements for Approval of Explosives, Section 15.20, Technical Requirements, Paragraph (g), Toxic Gases, pages 54 – 56.
4. State of California, Department of Transportation, Traffic Manual, Chapter 5, Traffic Control for Construction and Maintenance Work Zones, dated January 1996, pages 5-29, 5-35, and 5-36,
5. Institute of Makers of Explosives, Safety Library Publication No. 1, CONSTRUCTION GUIDE FOR STORAGE MAGAZINES, dated August 1993, pages 1 – 28.
6. Department of the Treasury; Bureau of Alcohol, Tobacco, and Firearms (ATF), ATF – Federal Explosives Law and Regulations; ATF P 5400.7 (09/90); 27CFR55; Subpart K – Storage, pages 39 – 76.
7. Code of Federal Regulations, 29 CFR, Subpart H, Hazardous Materials, 1910.109, Explosives and Blasting Agents (text taken from TEXT-Trieve, dated July 1, 1998).

Initial Statement of Reasons  
Explosives Reorganization

8. Code of Federal Regulations, 29 CFR, Subpart U, Blasting and the Use of Explosives, 1926.900 – 1926.914 (text taken from TEXT-Trieve, dated July 1, 1998).
9. Institute of Makers of Explosives, Safety Library Publication No. 21, IME GUIDANCE ON THE DESTRUCTION OF COMMERCIAL EXPLOSIVE MATERIALS UNDER THE U.S. ENVIRONMENTAL PROTECTION AGENCY'S IMMEDIATE RESPONSE EXCEPTION, dated July 1992, pages 5 – 9.
10. NFPA 10, Standard for Portable Fire Extinguishers, Appendix A, Explanatory Material, (Appendix A is not part of the requirements of this NFPA document but is included for informational purposes only. This appendix contains explanatory material, numbered to correspond with the applicable text paragraphs), A-1-4.2, pages 10-18 to 10-19, 1998 Edition.
11. Letter to Steve Jablonsky, Executive Director, Occupational Safety and Health Standards Board, from Gabriel Gillotti, Assistant Regional Administrator, Occupational Safety and Health Administration, dated December 13, 1989, regarding the enforcement coverage of both firework's manufacturers and DOD-contracted explosives manufacturers, with attachments.
12. Letter to Steve Jablonsky, Executive Director, Occupational Safety and Health Standards Board, from Gabriel Gillotti, Assistant Regional Administrator, Occupational Safety and Health Administration, dated May 17, 1994, requesting the OSHSB to respond to the California's Program Change Supplements, PCS 29S, 31S, and 32S, with attachments.
13. Letter to Connie Hunt, Assistant Regional Administrator, Occupational Safety and Health Administration, from John MacLeod, Executive Officer, dated March 19, 1996, regarding the OSHSB's response to Federal OSHA's concerns with California's Program Change Supplement, PCS 31S.

These documents are available for review during normal business hours at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California 95833.

**DOCUMENTS INCORPORATED BY REFERENCE**

1. Institute of Makers of Explosives, Safety Library Publication No. 22, RECOMMENDATIONS FOR THE SAFE TRANSPORTATION OF DETONATORS IN A VEHICLE WITH CERTAIN OTHER EXPLOSIVE MATERIALS, May 1993, pages 1 - 16.
2. The Fertilizer Institute, Definition and Test Procedures for Ammonium Nitrate Fertilizer, August 1984, pages 1 – 12.



Initial Statement of Reasons  
Explosives Reorganization

These documents are too cumbersome or impractical to publish in Title 8. Therefore, it is proposed to incorporate these documents by reference. Copies of these documents are available for review during normal business hours at the Standards Board Office located at 2520 Venture Oaks Way, Suite 350, Sacramento, California, 95833.

**REASONABLE ALTERNATIVES THAT WOULD LESSEN ADVERSE  
IMPACT ON SMALL BUSINESSES**

No reasonable alternatives were identified by the Board and no reasonable alternatives identified by the Board or otherwise brought to its attention would lessen the impact on small business.

**SPECIFIC TECHNOLOGY OR EQUIPMENT**

This proposal will not mandate the use of specific technologies or equipment.

**COST ESTIMATES OF PROPOSED ACTION**

**Costs or Savings to State Agencies.**

No costs or savings to state agencies will result as a consequence of the proposed action for the reasons already discussed (see “Identified Alternatives That Would Lessen Adverse Impact on Small Businesses”).

**Impact on Housing Costs.**

The Board has made an initial determination that this proposal will not significantly affect housing costs.

**Impact on Businesses.**

The Board has made an initial determination that this proposal will not result in a significant, statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states.

**Cost Impact on Private Persons or Businesses.**

The Board is not aware of any cost impacts that a representative private person or business would necessarily incur in reasonable compliance with the proposed action.

**Costs or Savings in Federal Funding to the State.**

The proposal will not result in costs or savings in federal funding to the state.

**Costs or Savings to Local Agencies or School Districts Required to be Reimbursed.**

No costs to local agencies or school districts are required to be reimbursed. See explanation under "Determination of Mandate".

**Other Nondiscretionary Costs or Savings Imposed on Local Agencies.**

This proposal does not impose nondiscretionary costs or savings on local agencies.

**DETERMINATION OF MANDATE**

The Occupational Safety and Health Standards Board has determined that the proposed regulations do not impose a local mandate. Therefore, reimbursement by the state is not required pursuant to Part 7 (commencing with Section 17500) of Division 4 of the Government Code because the proposed amendments will not require local agencies or school districts to incur additional costs in complying with the proposal. Furthermore, these regulations do not constitute a "new program or higher level of service of an existing program within the meaning of Section 6 of Article XIII B of the California Constitution."

The California Supreme Court has established that a "program" within the meaning of Section 6 of Article XIII B of the California Constitution is one which carries out the governmental function of providing services to the public, or which, to implement a state policy, imposes unique requirements on local governments and does not apply generally to all residents and entities in the state. (County of Los Angeles v. State of California (1987) 43 Cal.3d 46.)

These proposed regulations do not require local agencies to carry out the governmental function of providing services to the public. Rather, the regulations require local agencies to take certain steps to ensure the safety and health of their own employees only. Moreover, these proposed regulations do not in any way require local agencies to administer the California Occupational Safety and Health program. (See City of Anaheim v State of California (1987) 189 Cal.App.3d 1478.)

These proposed regulations do not impose unique requirements on local governments. All employees - state, local and private - will be required to comply with the prescribed standards.

**EFFECT ON SMALL BUSINESSES**

The Board has determined that the proposed amendments may affect small businesses.

**ASSESSMENT**

The adoption of the proposed amendments to these regulations will neither create nor eliminate jobs in the State of California nor result in the elimination of existing businesses or create or expand businesses in the State of California.

**ALTERNATIVES THAT WOULD AFFECT PRIVATE PERSONS**

No reasonable alternatives have been identified by the Board or have otherwise been identified and brought to its attention that would be more effective in carrying out the purpose for which the action is proposed or would be as effective and less burdensome to affected private persons than the proposed action.